sachusetts Agriculture 1980

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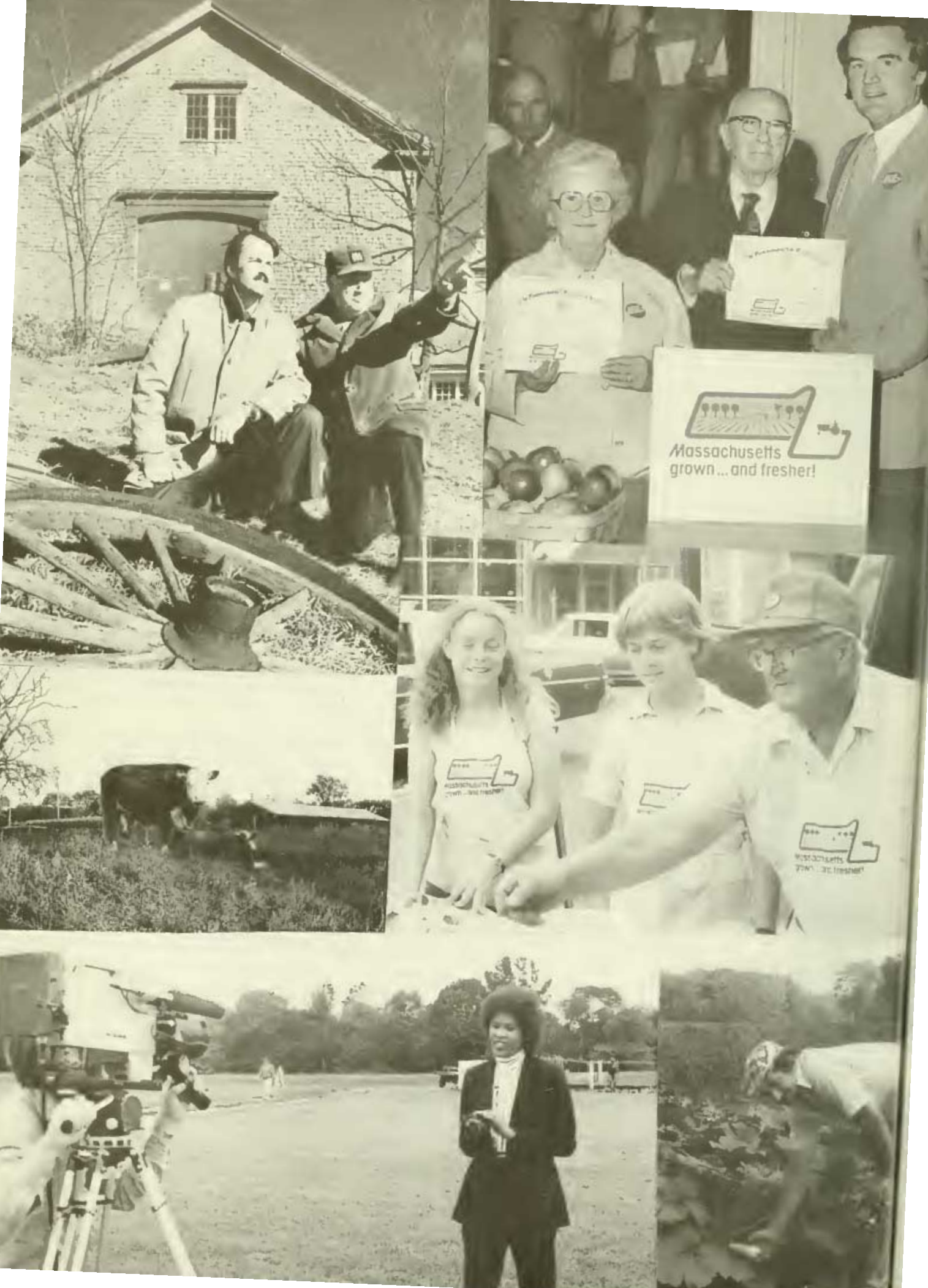
Commissioner of Food and Agriculture


Massachusetts
grown ... and fresher!

IN MEMORIAM

"Massachusetts Agriculture 1980" is dedicated to Dr. Gene McMurtry. The leader of the Massachusetts Cooperative Extension Service, Gene passed away January 4, 1981, after a long battle with cancer.

Dr. McMurtry will be sadly missed by all who knew him and worked with him. His contributions to the agricultural, community and rural development of this state were truly outstanding.

He helped Massachusetts in many ways. He served as Associate Dean for the College of Food and Natural Resources and as Associate Director for the Cooperative Extension Service at the University of Massachusetts in Amherst. He also served as Chairman of the National Extension Committee on Policy (ECOP) committee on community resources development and public affairs; member of the Chancellor's Committee on Continuing Education at UMass; Chairman of the Massachusetts Rural Development Committee; President of the Community Development Society of America; member of the Church of Jesus Christ of Latter Day Saints in Amherst; and member of the Congregational Church in Hatfield.

Dr. Gene McMurtry
Farmer, Educator and Administrator
1930 - 1981

Dr. McMurtry received many awards and was recognized nationally for his contributions to agriculture and the development of rural communities. Gene was the recipient of the gold medal award from the Massachusetts Society for the Promotion of Agriculture in 1980, commending his role as educator and Extension leader. In 1979, he was the recipient of the Gene McMurtry award, commemorating his work in bringing together agencies and organizations working with rural communities. He also received the USDA award for superior service, and was listed in "Who's Who" and "American Men in Science."

Gene McMurtry was a very special person because of his accomplishments, his hard work and his convictions, and also because of his sense of humor and his winning way. He has touched the lives of many residents of both urban and rural areas and they are the better for it. Gene McMurtry will be long remembered.

A MESSAGE FROM GOVERNOR EDWARD J. KING

As energy and transportation costs continue to rise, it makes good economic sense to grow and process more of our food needs locally.

Stepping up production and stimulating consumer demand for locally grown goods are efforts that go hand in hand. Both consumers and farmers have been very receptive to our state campaign promoting "Massachusetts grown and fresher" foods, and I hope you will also buy the many other food products "made in Massachusetts." All the food companies that process goods in our state provide jobs and bolster the economy of our Commonwealth.

This year the ten Northeastern State Departments of Agriculture, working in concert with the Coalition of Northeastern Governors have announced a new effort to strengthen the agricultural economy of our region. I have personally endorsed the recently published "Food and Agriculture Policy for the Northeast."

A coordinated effort to improve our region's farm economy is long overdue and it will help assure the growth and stability of our local food supply. To increase our production, and protect our remaining land resources, we must make every effort to include agriculture as a full partner in our regional development plans.

Here in Massachusetts we are continuing to make progress with our agricultural preservation program. This innovative and voluntary program represents a commitment by state government to keep our most valuable farmland in production and available for future needs. It is an investment in our local food production capability, and we hope to develop a permanent funding mechanism for this important work.

We are hoping to take other measures to encourage the expansion of the farm and food economy here in our state. The fisheries industry is another vital part of our food production capabilities, and we hope to provide a favorable economic climate for the growth of that industry as well.

I am sure that all Massachusetts residents would want to join with me in saluting their fellow citizens who work on the farms and in the related food and agricultural businesses across the state. This, the first industry to "Make it in Massachusetts," continues to thrive more than 350 years later and provide both livelihood and sustenance.

Make it in Massachusetts

Massachusetts grown...and fresher!

FOREWORD

The year 1980 marks the beginning of a new decade, and there are signs that we may be entering a new era for agriculture in Massachusetts.

Both the recent U.S. Census of Agriculture and the farm statistics recorded here show that farms and farmland acreage are holding steady in Massachusetts. The downward slide, a fact of life since World War II, has apparently stopped. We believe Massachusetts agriculture is turning the corner.

We are finding a much greater understanding and interest by the general public in the agriculture of our state. The demand for local produce is increasing at roadside farm stands and supermarkets. Food coops are also asking for more "Massachusetts grown and fresher" goods and farmers markets have proliferated sevenfold in the last five years. Our Department continues to seek an increase in the market for Massachusetts grown foods and food products through all channels of trade, and welcomes your suggestions and participation in this effort.

Another focal point has been the land issue. The response to the farmland preservation program has been gratifying and the support and funding provided by the Legislature and the Governor have been outstanding.

These and many other Departmental programs are explained in our annual report, which is combined in this publication with the yearly agricultural statistics bulletin.

As seen in the summary on page 42, recorded cash receipts from farm marketings in Massachusetts showed a three per cent increase over the previous twelve months. Receipts were up or held steady in 14 of the 23 major farm categories. The adverse impact of inflation is of course not factored into these statistics.

The estimated retail value of Massachusetts foods produced locally in 1980 is nearly $1 billion, and the retail value of plants and floral products grown in the state is another $75 million. Massachusetts is the number one cranberry producing state in the nation. We are also a leading flower producing state and apples are another important crop for both the fresh and processed market. Dairying remains the single largest agricultural enterprise in the state.

The statistical report in this publication was compiled under the direction of Charles Hammond and Rowland Scranton of the New England Crop and Livestock Reporting Service of the U.S. Department of Agriculture. Many thanks are in order for the fine assistance and cooperation of their office. Also our own Departmental staff must be highly commended, especially Janet Christensen, for making this publication possible.

Frederic Winthrop, Jr.

Frederic Winthrop, Jr.
Commissioner of Food and Agriculture

Massachusetts grown...and fresher!

PUBLICATION OF THIS DOCUMENT APPROVED BY JOHN MANTON, STATE PURCHASING AGENT

2/81-160530

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A MESSAGE FROM JOHN A. BEWICK,
SECRETARY OF ENVIRONMENTAL AFFAIRS

Massachusetts residents in both rural and urban areas should be concerned about conservation of our agricultural resources. The preservation and protection of our land could make the difference between food shortages and an adequate food supply in the future.

Much of Massachusetts farmland has been converted to non-agricultural uses. Today there are less than 700,000 acres of active farmland in Massachusetts. In 1945, however, there were over two million acres in production. Eighty-five percent of our food supply is imported from other states.

This administration is committed to revitalizing the farming industry by encouraging farmland preservation and by promoting Massachusetts grown products. Our important task is to demonstrate that economic development need not be undertaken at the expense of environmental quality. Soil conservation, pesticide control, nursery and greenhouse inspection, and increased farmland protection are just a few of this administration's ways of improving and protecting the state's agricultural environment.

The people of Massachusetts can also help. We must become more aware of the needs and conditions of our land and make sound efforts to preserve this valuable natural resource. As a government and as a people, we have a responsibility to improve the state's agricultural industry so we can be prepared for the food demands of the future.

MASSACHUSETTS AGRICULTURAL STATISTICS

MASSACHUSETTS DEPARTMENT OF FOOD AND AGRICULTURE

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LIVESTOCK REVIEW
1979

CATTLE:

The January 1, 1980 inventory of cattle and calves on Massachusetts farms totaled 103,000 head, 8 percent above a year earlier and 4 percent above January 1, 1978. Total value of the 1980 inventory was $70 million, an increase of $16.8 million from 1979. This increase resulted from both, increase in cattle numbers and value per head. The January 1, 1980 per head value of $680 is a record value. The inventory break down by classes shows milk cows declining in numbers, with other classes showing either increases or no change from 1979.

HOGS:

December 1, 1979 inventory of hogs and pigs on Massachusetts farms totaled 60,000, unchanged from both 1978 and 1977. Of the total, 15 percent or 9,000 head were breeding animals while 51,000 were intended for market. Farmers marketed 17.8 million pounds of pork during 1979 compared to 16.6 million during 1978. Due to the increased marketings, gross income from hogs and pigs totaled $8,138,000, 4 percent above the previous year.

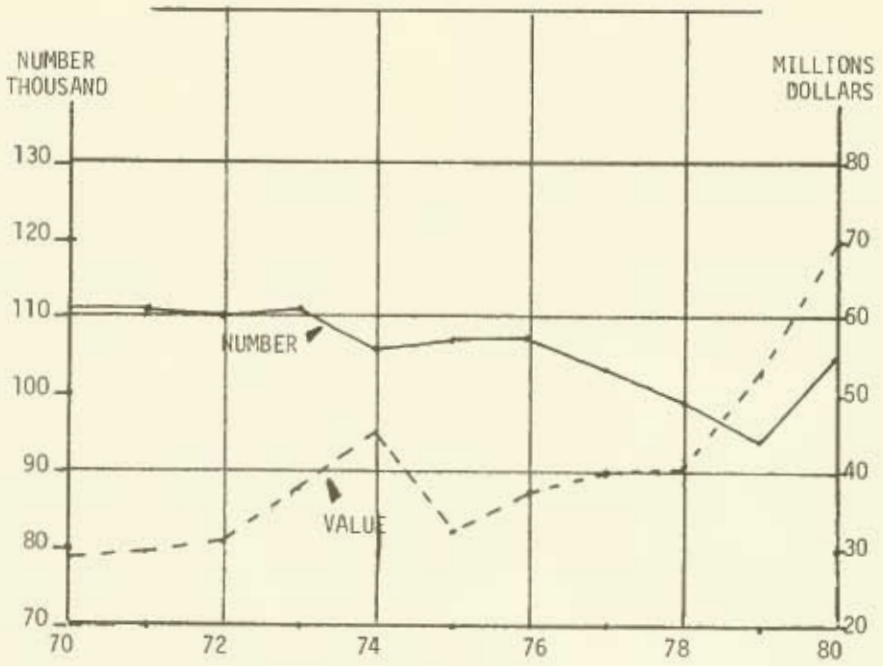
SHEEP AND LAMBS:

Massachusetts sheep growers indicated 7,100 head of sheep and lambs on hand January 1, 1980, 6 percent above the previous year. Value of the 1980 flock totaled $557,000, with average value per head at $78.50. This was well above the $63.00 per head average on January 1, 1979. Market prices for sheep increased $1.00 per hundredweight during 1979 and averaged $39.00 per hundredweight for sheep and $85.00 per hundredweight for lambs. There was 191,000 pounds of lamb and mutton sold during 1979 for a gross income of $199,000. This was down 12 percent from 1978 and a direct result of the decreased marketings.

WOOL:

Massachusetts wool producers sheared 6,600 head during 1979 for a total wool production of 45,000 pounds. The price per pound for sheared wool was a record 84 cents and returned a gross $38,000 to Bay State wool producers.

MASSACHUSETTS CATTLE
INVENTORY, NUMBER AND VALUE



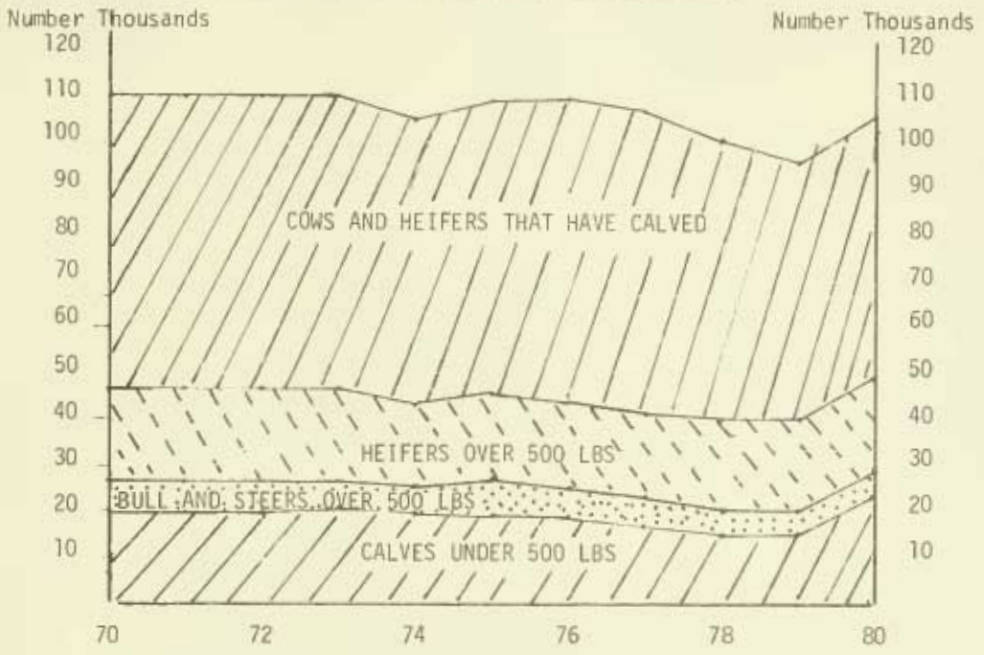
CATTLE: NUMBER AND VALUE OF ALL CATTLE AND CALVES ON FARMS
JANUARY 1, MASSACHUSETTS, 1970-1980

YEAR	NUMBER	VALUE	
		PER HEAD	TOTAL
	1,000 HEAD	DOLLARS	1,000 DOLLARS
1970	111	260.00	28,860
1971	111	270.00	29,970
1972	110	290.00	31,900
1973	111	335.00	37,185
1974	105	420.00	44,100
1975	107	315.00	33,705
1976	107	345.00	36,915
1977	104	380.00	39,520
1978	99	415.00	41,085
1979	95	560.00	53,200
1980	103	680.00	70,040

CATTLE: JANUARY 1, INVENTORY BY CLASSES, MASSACHUSETTS, 1970-1980

YEAR	ALL CATTLE AND CALVES	COWS & HEIFERS THAT HAVE CALVED		HEIFERS 500 LBS. AND OVER			STEERS 500 LBS.+	BULLS 500 LBS.+	STEERS HEIFERS & BULLS -500 LBS.
		BEEF	MILK	BEEF COW REPLACEMENTS	MILK COW REPLACEMENTS	OTHER			
		1,000 HEAD							
1970	111	7	60	2	15	2	2	2	21
1971	111	7	60	2	15	2	2	2	21
1972	110	8	58	2	15	2	2	2	21
1973	111	8	57	2	16	2	2	2	22
1974	105	8	54	2	15	2	2	2	20
1975	107	9	54	2	17	1	3	2	19
1976	107	9	55	2	17	1	3	2	18
1977	104	9	53	2	17	1	2	2	18
1978	99	8	51	2	16	1	2	2	17
1979	95	9	46	3	15	1	2	2	17
1980	103	10	44	3	16	1	3	2	24

MASSACHUSETTS CATTLE INVENTORY NUMBERS



CATTLE AND CALVES: INVENTORY, SUPPLY, AND DISPOSITION, MASSACHUSETTS, 1970-1979

YEAR	ON HAND JAN. 1 ALL CATTLE	CALF CROP	INSHIPMENTS	MARKETINGS 1/ CATTLE	MARKETINGS 1/ CALVES	FARM SLAUGHTER CATTLE & CALVES	DEATHS CATTLE	DEATHS CALVES
				1,000 HEAD				
1970	111	60	13	28	38	1	2	4
1971	111	60	12	29	37	1	2	4
1972	110	60	11	29	33	1	2	5
1973	111	57	10	33	30	1	3	6
1974	105	55	8	27	26	1	2	5
1975	107	56	7	25	29	1	2	6
1976	107	55	7	26	30	1	2	6
1977	104	52	7	22	33	1	2	6
1978	99	47	5	20	26	2	2	6
1979	95	47	1	13	18	1	2	6

1/ Excludes interfarm sales.

CATTLE AND CALVES: PRODUCTION AND INCOME, MASSACHUSETTS, 1970-1979

YEAR	PRODUCTION	MARKETINGS	PRICE PER 100 LBS. CATTLE	PRICE PER 100 LBS. CALVES	CASH RECEIPTS	VALUE OF HOME CONSUMPTION	GROSS INCOME
	1,000 POUNDS		DOLLARS			1,000 DOLLARS	
1970	22,430	31,456	20.80	30.50	6,852	340	7,192
1971	23,175	32,495	21.10	28.00	7,080	363	7,443
1972	24,660	32,020	24.20	34.00	8,025	416	8,441
1973	28,875	40,115	33.50	44.00	13,717	576	14,293
1974	30,405	32,845	27.50	28.00	9,043	473	9,516
1975	27,430	30,190	22.70	23.80	6,882	488	7,370
1976	24,980	31,590	26.00	28.50	8,283	599	8,842
1977	19,200	26,750	26.20	38.20	7,377	676	8,503
1978	18,380	23,680	41.90	57.00	10,293	1,441	11,734
1979	19,010	14,734	57.00	76.00	8,727	1,520	10,247

HOGS: INVENTORY NUMBERS, PIG CROP AND DISPOSITION, MASS., 1970-1979

YEAR	ON HAND DEC. 1 PREV. YEAR	PIG CROP		MARKETINGS 1/	FARM SLAUGHTER	DEATHS
		DEC.-MAY	JUNE-NOV.			
	1,000 HEAD				1,000 HEAD	
1970	83	46	47	90	1	12
1971	73	51	47	88	1	9
1972	73	44	43	89	1	7
1973	63	42	43	80	1	7
1974	60	42	41	82	1	6
1975	51	43	39	78	1	4
1976	50	45	37	75	1	6
1977	50	35	43	61	1	6
1978	60	36	41	71	1	5
1979	60	39	42	76	1	4

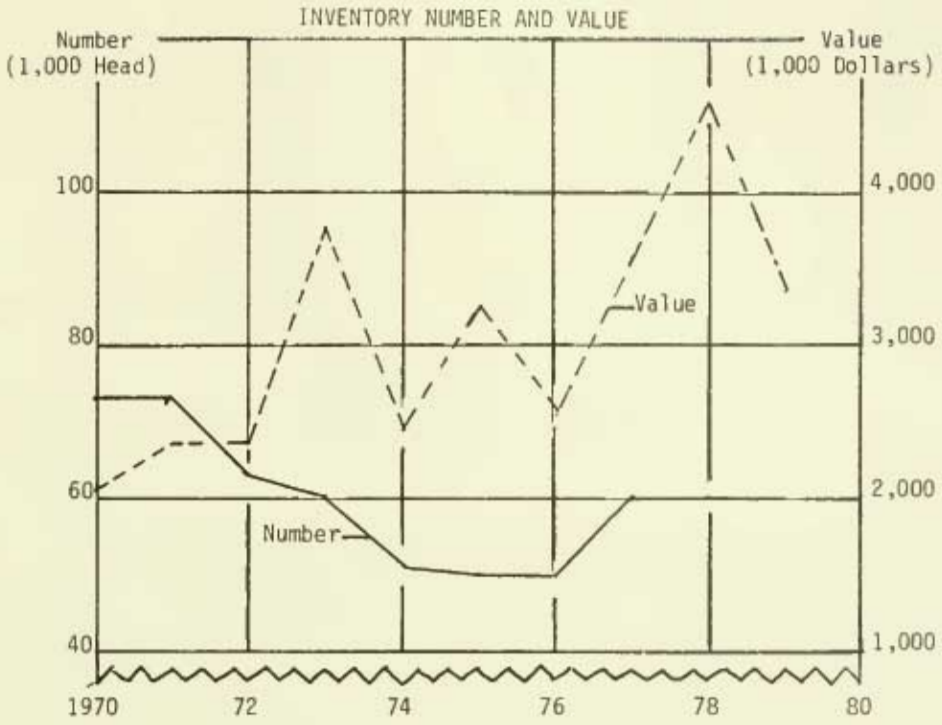
PIG CROP: SOWS FARROWED AND PIGS SAVED, MASS., 1970-1979

YEAR	SPRING FARROWINGS			FALL FARROWINGS		
	SOWS (1,000 HEAD)	PIGS PER LITTER	PIGS SAVED PER 1,000	SOWS (1,000 HEAD)	PIGS PER LITTER	PIGS SAVED PER 1,000
1970	7.4	6.2	46	7.8	6.0	47
1971	7.6	6.7	51	7.4	6.3	47
1972	7.0	6.3	44	7.0	6.2	43
1973	7.0	6.0	42	7.1	6.0	43
1974	7.0	6.0	42	6.8	6.0	41
1975	7.0	6.2	43	6.8	5.7	39
1976	6.6	6.8	45	5.7	6.5	37
1977	5.0	6.9	35	6.5	6.6	43
1978	5.0	7.2	36	6.0	6.8	41
1979	6.0	6.5	39	6.5	6.5	42

HOGS: PRODUCTION AND INCOME, MASS., 1970-1979

YEAR	PRODUCTION	MARKETING	PRICE PER 100 POUNDS	CASH RECEIPTS	VALUE OF HOME CONSUMPTION	GROSS INCOME
	1,000 POUNDS		DOLLARS		1,000 DOLLARS	
1970	19,139	19,998	18.50	3,540	81	3,781
1971	19,746	19,556	17.50	3,422	77	3,499
1972	19,191	19,835	25.00	4,959	110	5,069
1973	18,862	18,068	37.00	6,685	171	6,856
1974	18,764	19,910	33.00	6,570	254	6,824
1975	19,100	18,260	45.00	8,217	347	8,564
1976	17,891	17,377	45.00	7,820	355	8,175
1977	15,832	14,062	37.00	5,203	292	5,495
1978	17,211	16,640	45.00	7,488	304	7,792
1979	18,640	17,820	44.00	7,841	297	8,138

MASSACHUSETTS HOGS

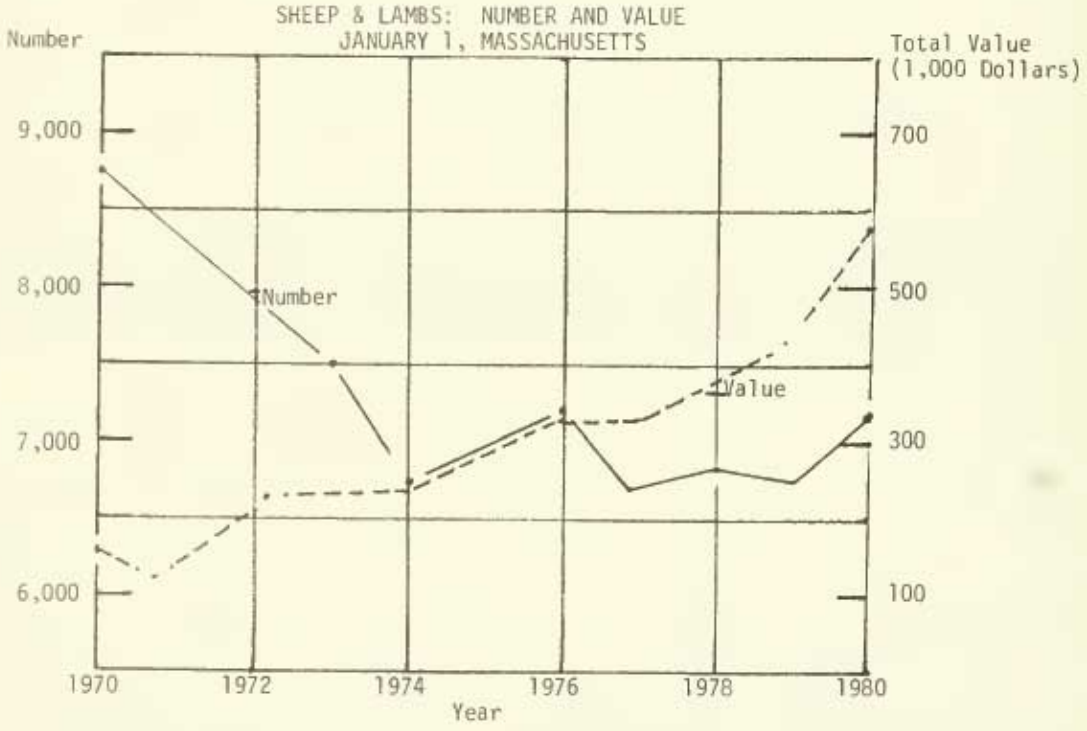


HOGS: NUMBER AND VALUE OF HOGS ON FARMS DECEMBER 1, MASS., 1970-1979

YEAR	NUMBER			VALUE	
	BREEDING	MARKET	TOTAL	PER HEAD	TOTAL
		1,000 HEAD		DOLLARS	1,000 DOLLARS
1970	11	62	73	28.50	2,081
1971	9	64	73	32.00	2,336
1972	9	54	63	37.50	2,363
1973	10	50	60	62.50	3,750
1974	8	43	51	48.00	2,448
1975	8	42	50	64.50	3,225
1976	7	43	50	50.50	2,525
1977	8	52	60	59.50	3,570
1978	8	52	60	76.50	4,590
1979	9	51	60	55.50	3,330

SHEEP AND LAMBS: NUMBER AND VALUE ON FARMS,
JANUARY 1, MASSACHUSETTS, 1971-1980

YEAR	NUMBER	VALUE	
		PER HEAD	TOTAL
	1,000 HEAD	DOLLARS	1,000 DOLLARS
1971	8.2	20.00	164
1972	7.8	20.00	156
1973	7.5	28.00	210
1974	6.9	40.00	276
1975	7.0	46.50	326
1976	7.2	46.00	331
1977	6.7	48.00	322
1978	6.8	53.50	364
1979	6.7	63.00	422
1980	7.1	78.50	557



SHEEP AND LAMBS: INVENTORY NUMBER BY CLASS, JAN. 1, MASSACHUSETTS, 1971-1980

YEAR	ALL SHEEP AND LAMBS	LAMBS			ONE YEAR AND OVER	
		ALL LAMBS	EWES	WETHERS AND RAMS	EWES	WETHERS AND RAMS
				1,000 HEAD		
1971	8.2	1.7	1.4	.3	5.9	.6
1972	7.8	1.4	1.0	.4	5.8	.6
1973	7.5	1.4	1.0	.4	5.5	.6
1974	6.9	1.4	1.0	.4	5.0	.5
1975	7.0	1.5	1.1	.4	5.1	.4
1976	7.2	1.5	1.1	.4	5.3	.4
1977	6.7	1.4	1.0	.4	4.9	.4
1978	6.8	1.6	1.1	.5	4.7	.5
1979	6.7	1.3	1.0	.3	4.9	.5
1980	7.1	1.6	1.2	.4	5.0	.5

SHEEP AND LAMBS: INVENTORY NUMBERS, LAMB CROP AND DISPOSITION, MASSACHUSETTS 1970-1979

YEAR	ON HAND JAN. 1 ALL SHEEP AND LAMBS	LAMB CROP	MARKETING		FARM SLAUGHTER SHEEP AND LAMBS	DEATHS SHEEP & LAMBS
			SHEEP	LAMBS		
	1,000 HEAD					
1970	8.6	6.2	1.6	3.2	.1	1.3
1971	8.2	6.2	1.5	2.8	.3	1.1
1972	7.8	5.6	1.3	2.9	.2	1.1
1973	7.5	5.3	1.4	2.7	.4	1.1
1974	6.9	5.2	.5	2.4	.2	1.1
1975	7.0	5.5	1.2	2.6	.4	1.1
1976	7.2	5.6	1.5	3.3	.3	1.0
1977	6.7	5.7	.8	3.4	.4	1.0
1978	6.8	5.3	1.0	2.9	.5	1.0
1979	6.7	5.1	.8	2.5	.5	.9

SHEEP AND LAMBS: PRODUCTION AND INCOME, MASSACHUSETTS, 1970-1979

YEAR	PRODUCTION	MARKETINGS	PRICE PER 100 LBS.		CASH RECEIPTS	VALUE OF HOME CONSUMPTION	GROSS INCOME
			SHEEP	LAMBS			
	1,000 POUNDS		DOLLARS			1,000 DOLLARS	
1970	391	454	8.40	26.00	80	3	89
1971	440	443	10.00	25.50	91	9	100
1972	382	397	12.00	32.50	98	7	105
1973	366	395	14.00	41.00	112	21	133
1974	349	318	17.00	37.00	91	10	101
1975	378	302	26.00	68.00	150	35	185
1976	325	336	28.00	72.00	182	35	203
1977	343	268	29.00	72.00	150	46	196
1978	341	264	38.00	84.00	160	67	227
1979	327	191	39.00	85.00	117	82	199

WOOL: FARM PRODUCTION, PRICE AND VALUE, MASSACHUSETTS, 1970-1979

YEAR	SHEEP SHORN	WEIGHT PER FLEECE	SHORN WOOL PRODUCTION	PRICE PER POUND	VALUE
	1,000 HEAD	POUNDS	1,000 POUNDS	CENTS	1,000 DOLLARS
1970	7.9	7.2	57	41	23
1971	7.7	6.9	53	31	16
1972	7.2	7.2	52	34	18
1973	6.9	7.2	50	71	36
1974	6.6	7.4	49	62	30
1975	6.4	7.2	46	31	14
1976	6.7	6.9	46	60	28
1977	6.2	7.1	44	78	34
1978	6.3	6.8	43	74	32
1979	6.6	6.8	45	84	38

DAIRY REVIEW
1979

MILK PRODUCTION:

Milk production during 1979 totaled 563 million pounds down 1 percent from the previous year's production of 571 million pounds. Production per cow at 12,511 pounds continued an upward trend that started in 1974 and has set new records each of the last three years. The number of dairy cows during 1979 averaged 45,000 head, down 3,000 head from 1978. The decrease in the number of milk cows continued the long term downward trend.

MILK DISPOSITION AND BLEND PRICE:

Farmers in Massachusetts marketed a total of 554,000,000 pounds of milk during 1979, down 1 percent from 1978. Of the total amount marketed, 13,500,000 pounds were retailed directly to consumers by farmers, compared with 14,900,000 pounds in 1978. Milk used on farms totaled 9,000,000 pounds, of which 4,000,000 pounds were for food and drink, unchanged from 1978. The other 5,000,000 pounds were fed to calves, the same as in 1978.

The annual wholesale milk blend price averaged $12.80 per hundredweight for 1979, $1.30 higher than in 1978. The blend price during the year had a low of $12.00 per hundredweight in May and June and a high of $13.90 in November. The total cash receipts from marketings of milk and cream during 1979 was $73,404,000, up $6,054,000 from the 1978 total of $67,829,000.

MANUFACTURED DAIRY PRODUCTS:

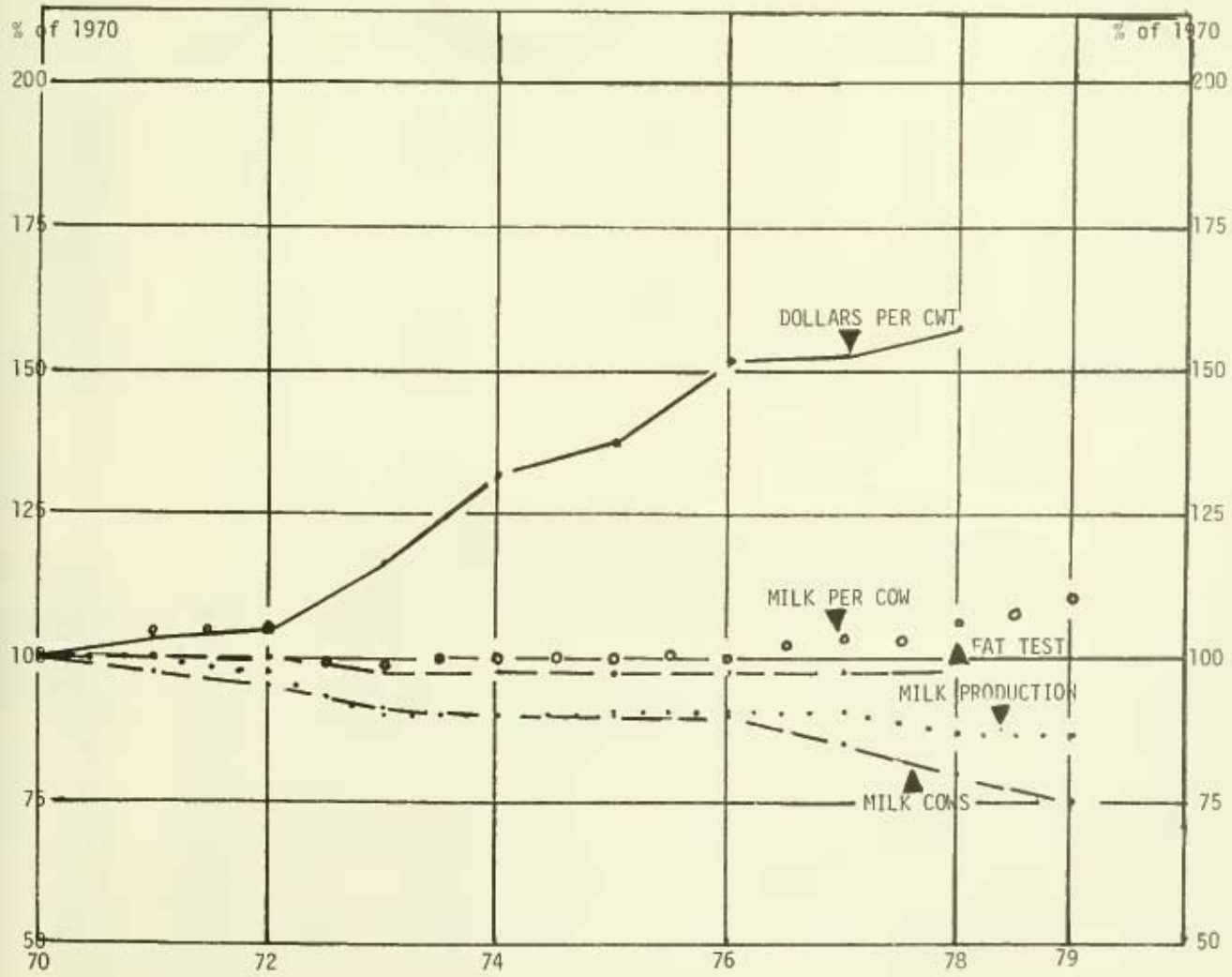
A total of 6,255,000 pounds of cheese was produced in Massachusetts during 1979, down 20 percent from the 1978 production of 7,780,000 pounds. Ice cream production totaled 42,463,000 gallons, down 1 percent from 1978. The production of ice milk totaled 10,454,000 gallons, up 7 percent from 1978. Milk sherbet production totaled 1,829,000 gallons, down 13 percent from the previous year.

MILK: FARM PRODUCTION AND VALUE OF MILK AND MILK PRODUCTS SOLD, MASSACHUSETTS, 1970-1979

YEAR	NO. MILK COWS ON 1/ FARMS	PRODUCTION 2/					CASH RECEIPTS FROM MARKETINGS OF MILK AND CREAM	GROSS FARM INCOME FROM DAIRY PRODUCTS 3/	FARM VALUE OF MILK PRODUCED 4/
		PER MILK COW		PERCENTAGE OF FAT IN ALL MILK PRODUCED	TOTAL				
		MILK	MILKFAT		MILK	MILKFAT			
	THOUS.	POUNDS		PERCENT	MILLION POUNDS			1,000 DOLLARS	
1970	60	10,967	408	3.72	658	24	47,788	48,381	48,758
1971	59	11,153	414	3.71	658	24	48,248	48,846	49,218
1972	57	11,035	409	3.71	629	23	47,441	47,979	48,370
1973	55	10,818	395	3.65	595	22	50,582	51,190	51,646
1974	54	10,981	402	3.66	593	22	56,643	58,717	59,241
1975	54	11,130	404	3.63	601	22	59,884	60,596	61,122
1976	54	11,074	405	3.66	598	22	65,882	66,669	67,215
1977	51	11,706	431	3.68	597	22	65,882	66,556	67,103
1978	48	11,917	437	3.67	571	21	67,350	67,949	68,526
1979	45	12,511	455	3.64	563	20	73,404	73,934	74,598

1/ Average number on farms during year, excluding heifers not yet fresh.
2/ Excluded milk sucked by calves.
3/ Cash receipts from marketing of milk and cream plus value of milk for home consumption and farm-churned butter.
4/ Includes value of milk fed to calves at average returns per 100 pounds of milk in combined marketings of milk and cream.

TREND IN MILK COWS, PRODUCTION, FAT TEST AND PRICE;
MASSACHUSETTS 1970-1979



MILK: QUANTITY MARKETED, PRICE AND CASH RECEIPTS, MASSACHUSETTS, 1970-1979

YEAR	SOLD TO PLANTS			SOLD DIRECTLY TO CONSUMERS			COMBINED MARKETINGS		
	QUANTITY	PRICE PER CWT.	CASH RECEIPTS	QUANTITY	PRICE PER QUART	CASH RECEIPTS	QUANTITY	PRICE PER CWT.	CASH RECEIPTS
	Million Pounds	Dollars	1,000 Dollars	Million Quarts	Cents	1,000 Dollars	Million Pounds	Dollars	1,000 Dollars
1970	595	6.82	40,579	23.3	31.0	7,209	645	7.41	47,788
1971	600	6.96	41,760	20.9	31.0	6,488	645	7.48	48,248
1972	580	7.23	41,934	17.2	32.0	5,507	617	7.69	47,441
1973	550	8.22	45,210	15.3	35.0	5,372	583	8.68	50,582
1974	550	9.50	52,250	14.4	40.0	5,768	581	9.99	58,018
1975	555	9.65	53,558	15.8	40.0	6,326	589	10.17	59,884
1976	550	10.70	58,850	16.7	42.0	7,032	586	11.24	65,882
1977	550	10.70	58,850	16.7	42.0	7,032	586	11.24	65,882
1978	530	11.50	60,950	14.9	43.0	6,400	562	11.98	67,350
1979	525	12.80	67,200	13.5	46.0	6,204	554	13.25	73,404

MILK: QUANTITIES USED AND MARKETED BY FARMERS, MASSACHUSETTS, 1970-1979

YEAR	TOTAL PRODUCED	MILK USED ON FARMS WHERE PRODUCED			MILK MARKETED BY FARMERS		
		USED FOR MILK, CREAM AND BUTTER	FED TO CALVES	TOTAL	SOLD TO PLANTS AND DEALERS	SOLD DIRECTLY TO CONSUMERS	TOTAL
	Million Pounds						
1970	658	8	5	13	595	50	645
1971	658	8	5	13	600	45	645
1972	629	7	5	12	580	37	617
1973	595	7	5	12	550	33	583
1974	593	7	5	12	550	31	581
1975	601	7	5	12	555	34	589
1976	598	7	5	12	550	36	586
1977	597	6	5	11	550	36	586
1978	571	4	5	9	530	32	562
1979	563	4	5	9	525	29	554

MILK: SOLD TO PLANTS, MONTHLY AND ANNUAL AVERAGE PRICE PER 100 POUNDS RECEIVED BY FARMERS, MASSACHUSETTS, 1970-1979

YEAR	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	ANNUAL AVERAGE
	Dollars												
1970	6.95	6.85	6.65	6.50	6.30	6.20	6.65	6.90	7.15	7.35	7.30	7.20	6.82
1971	7.05	7.00	6.90	6.65	6.45	6.30	6.70	7.00	7.30	7.40	7.45	7.25	6.94
1972	7.20	7.25	7.00	6.75	6.65	6.50	6.95	7.45	7.75	7.95	7.95	7.65	7.24
1973	7.70	7.75	7.55	7.30	7.15	7.20	7.75	8.55	9.25	9.55	9.80	9.70	8.22
1974	9.80	9.90	9.85	9.80	9.25	8.50	8.90	9.40	9.70	9.80	10.00	9.45	9.50
1975	9.05	9.00	8.75	8.60	8.35	8.35	9.00	9.60	10.30	10.80	11.10	11.20	9.45
1976	11.10	10.80	10.70	10.00	9.90	9.75	10.40	11.00	11.30	11.50	11.20	11.70	10.70
1977	10.60	10.50	10.20	10.20	9.90	10.00	10.50	10.90	11.20	11.40	11.40	11.20	10.70
1978	11.10	11.20	11.00	10.70	10.70	10.60	11.00	11.60	12.10	12.70	12.90	12.60	11.50
1979	12.70	12.80	12.50	12.20	12.00	12.00	12.50	13.10	13.40	13.80	13.90	13.40	12.80

MASSACHUSETTS MILK COWS ON FARMS, BY QUARTERS 1970-1979

MONTH	1970	1971	1972	1973	1974	1975	1976	1977	1978	1979
					Thousands of Head					
Mar. 31	60	60	58	56	54	55	54	51	50	46
June 30	60	59	57	55	54	53	53	51	48	45
Sept. 30	60	58	57	54	54	54	53	51	47	45
Dec. 31	60	58	57	54	54	55	53	51	46	45
Annual	60	59	57	55	54	54	54	51	48	45

MASSACHUSETTS MILK PRODUCTION PER COW, BY QUARTERS 1970-1979

MONTH	1970	1971	1972	1973	1974	1975	1976	1977	1978	1979
					Pounds					
Jan-Mar.	2,750	2,700	2,793	2,714	2,704	2,725	2,775	2,900	2,900	3,085
April-June	2,900	2,949	2,965	2,880	2,891	3,020	3,000	3,060	3,125	3,290
July-Sept.	2,683	2,810	2,649	2,612	2,673	2,720	2,755	2,940	2,955	3,020
Oct.-Dec.	2,634	2,694	2,628	2,612	2,713	2,620	2,700	2,865	2,980	3,045
Annual	10,967	11,153	11,035	10,818	10,981	11,130	11,075	11,706	11,896	12,511

MASSACHUSETTS MILK PRODUCTION, BY QUARTERS 1970-1979

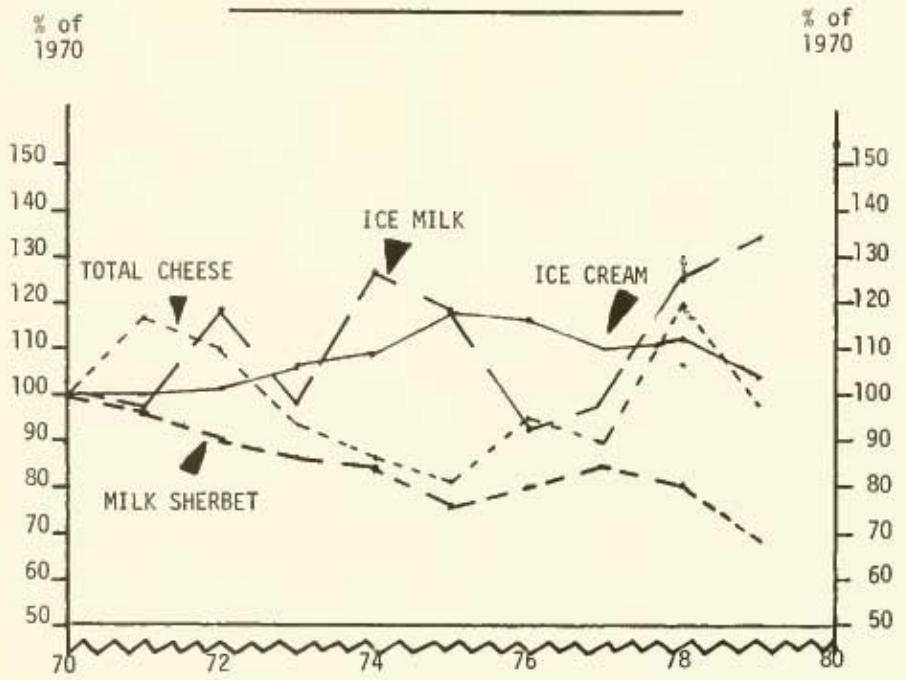
MONTH	1970	1971	1972	1973	1974	1975	1976	1977	1978	1979
					Million Pounds					
Mar.	165	162	162	152	146	150	150	148	145	142
June	174	174	169	161	159	160	159	156	150	148
Sept.	161	163	151	141	147	147	146	149	139	136
Dec.	158	159	147	141	141	144	143	147	137	137
Annual	658	658	629	595	593	601	598	597	571	563

MANUFACTURED DAIRY: PRODUCTION MAJOR PRODUCTS, MASS., 1970-1979

YEAR	TOTAL CHEESE 1/	ICE CREAM	ICE MILK	MILK SHERBET
	1,000 POUNDS		1,000 GALLONS	
1970	6,430	40,944	7,822	2,645
1971	7,268	40,455	7,514	2,556
1972	6,416	41,025	8,802	2,393
1973	5,976	42,302	7,742	2,330
1974	5,412	43,607	9,611	2,186
1975	5,288	47,761	9,177	1,985
1976	6,123	46,320	7,246	2,116
1977	5,786	45,255	7,483	2,180
1978	7,780	42,909	9,779	2,102
1979	6,255	42,463	10,454	1,829

1/ Excluding cottage cheese.

PRODUCTION TRENDS FOR CHEESE, ICE CREAM, ICE MILK AND MILK SHERBET; MASSACHUSETTS 1970-1979



CHICKENS:

The December 1, 1979 inventory of chickens on farms (excluding broilers) in Massachusetts showed 1,726,000 birds, up 9 percent from a year earlier but still 13 percent below 1977. Of these, there were 617,000 hens of laying age, up 12 percent from 1978. Pullets of laying age increased 22 percent over 1978 to 755,000. Total value of the December 1 inventory at $3,711,000 was up 15 percent from 1978, due partly to a 10 cent rise in the average value per bird. Growers marketed 7,937,000 pounds of mature chickens during 1979 at 13.2 cents per pound compared to 10,500,000 pounds at 12.3 cents per pound the previous year.

EGGS:

Massachusetts egg production in 1979 fell to 339 million, which is a 10 year low and a 1 percent drop from last year's production of 341 million eggs. Although the annual rate of lay per bird increased to 244, an all time high, the number of layers on hand decreased by 26,000 causing the decline in egg production. For their eggs, Massachusetts growers received an average of 73.8 cents per dozen during 1979. This price is an 11 percent increase over the 1978 average price per dozen of 66.2 cents. Gross income received for eggs was $20,849,000 in 1979, an 11 percent increase over the previous year.

TURKEYS:

Farmers in Massachusetts raised 140,000 turkeys during 1979, 6,000 or 4 percent fewer than during the previous year. The average weight of these predominantly heavy breed birds was 20.0 pounds. For their turkeys, growers during 1979 received an average of 65.0 cents per pound, which is 3 cents per pound less than the price received in 1978. Total value of the 1979 production was $1,820,000, down 11 percent from the previous year, but up 21 percent from 1977.

CHICKENS: NUMBER, VALUE, AND CLASSES OF CHICKENS ON FARMS, DECEMBER 1, MASS., 1970-1979

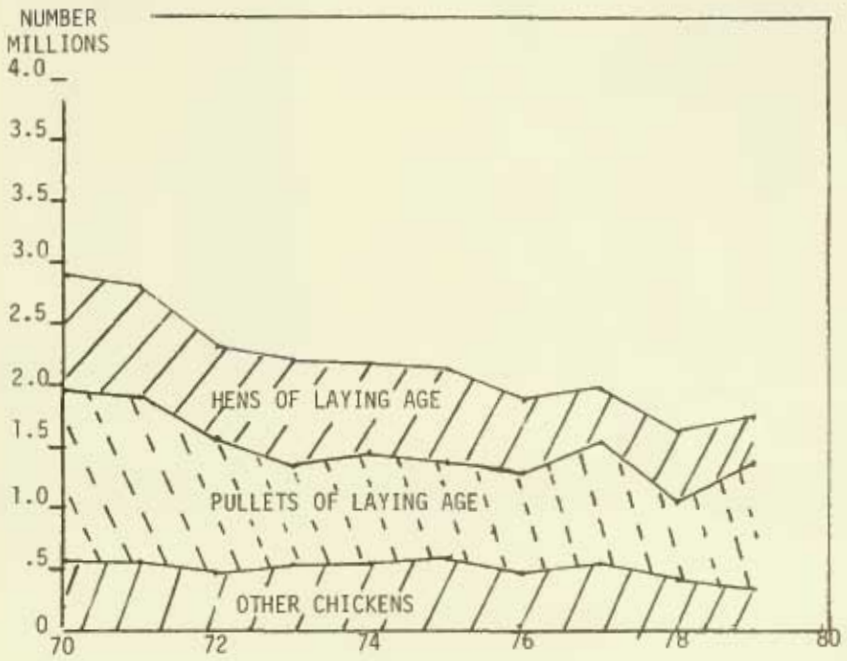
YEAR	ALL CHICKENS	VALUE		HENS AND PULLETS OF LAYING AGE		OTHER CHICKENS
		PER HEAD	TOTAL	HENS	PULLETS	
	1,000 HEAD	DOLLARS	1,000 DOLLARS		1,000 HEAD	
1970	2,852	1.90	5,419	884	1,415	553
1971	2,769	1.85	5,171	886	1,313	570
1972	2,279	1.40	4,280	729	1,069	481
1973	2,240	2.00	4,480	896	807	537
1974	2,237	2.10	4,698	772	939	526
1975	2,091	2.35	4,914	725	786	580
1976	1,870	2.40	4,488	593	782	495
1977	1,990	2.05	4,080	465	1,005	520
1978	1,580	2.05	3,239	550	620	410
1979	1,726	2.15	3,711	617	755	354

CHICKENS: PRODUCTION, DISPOSITION, CASH RECEIPTS, AND GROSS INCOME, MASSACHUSETTS, 1970-1979

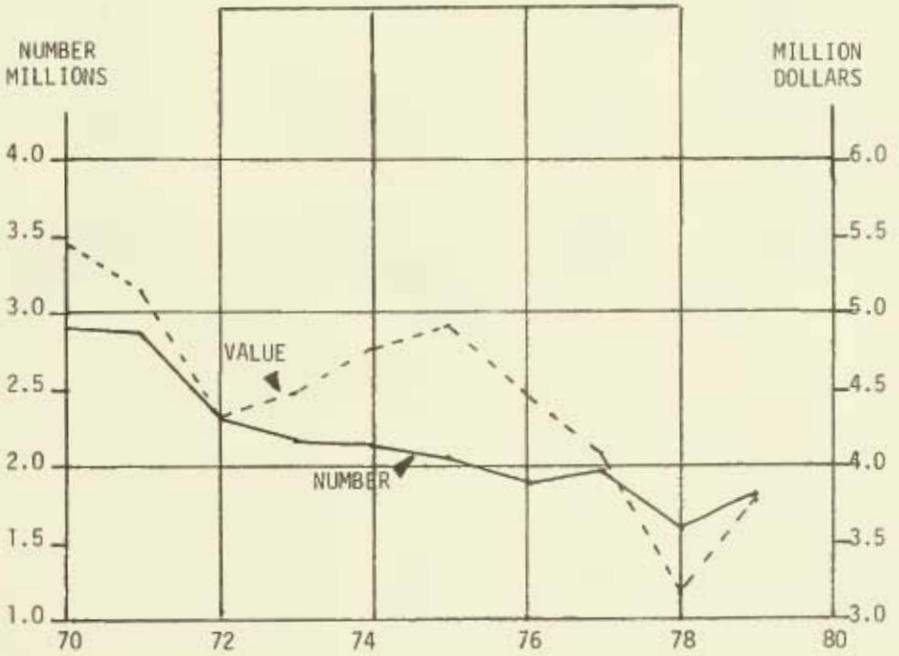
YEAR	NUMBER OF BIRDS			LIVEWEIGHT			PRICE PER LB.	CASH RECEIPTS	VALUE OF CHICKENS CONSUMED	GROSS INCOME
	PRODUCED 2/	CONSUMED 3/	SOLD	PRODUCED 2/	CONSUMED 3/	SOLD				
	1,000			1,000 POUNDS			CENTS		1,000 DOLLARS	
1970	1,352	18	1,520	8,102	85	8,816	9.6	846	8	854
1971	1,628	13	1,672	8,869	61	9,196	8.5	782	5	787
1972	1,902	12	1,628	10,089	55	8,791	9.5	835	5	840
1973	1,730	12	1,830	8,944	55	9,699	15.4	1,494	8	1,502
1974	1,870	12	1,697	10,831	55	10,012	10.3	1,031	6	1,037
1975	1,411	11	1,806	7,375	51	9,572	10.3	986	5	991
1976	1,676	11	1,746	8,639	51	9,063	13.3	1,277	7	1,284
1977	1,800	11	1,499	9,120	51	8,245	11.3	932	6	938
1978	1,640	11	1,909	8,484	51	10,500	12.3	1,292	6	1,298
1979	1,700	11	1,443	8,822	51	7,937	13.2	1,048	7	1,055

1/ Does not include commercial broilers.
2/ Production is the number (or pounds) available for utilization during the year, i.e., sales plus home consumption, plus or minus change in inventory.
3/ Consumed in farm households on farms where produced.

MASSACHUSETTS CHICKENS:
CLASSES OF CHICKENS ON FARMS



MASSACHUSETTS CHICKEN INVENTORY:
NUMBER AND VALUE



EGGS, NUMBER OF HENS AND PULLETS OF LAYING AGE, RATE OF LAY AND PRODUCTION, MASS.,1970-1979

YEAR	HENS & PULLETS ANNUAL AVERAGE	RATE OF LAY 1/	EGG PRODUCTION
	Thousands	Number	Millions
1970	2,370	220	521
1971	2,274	225	512
1972	2,010	232	466
1973	1,721	228	393
1974	1,610	234	376
1975	1,669	241	402
1976	1,430	240	343
1977	1,485	238	354
1978	1,413	241	341
1979	1,387	244	339

1/ Annual rate of lay per layer on hand. (Eggs produced during year divided by average number of layers.)

EGGS: PRODUCTION, PRICE, CASH INCOME AND VALUE, MASSACHUSETTS, 1970-1979

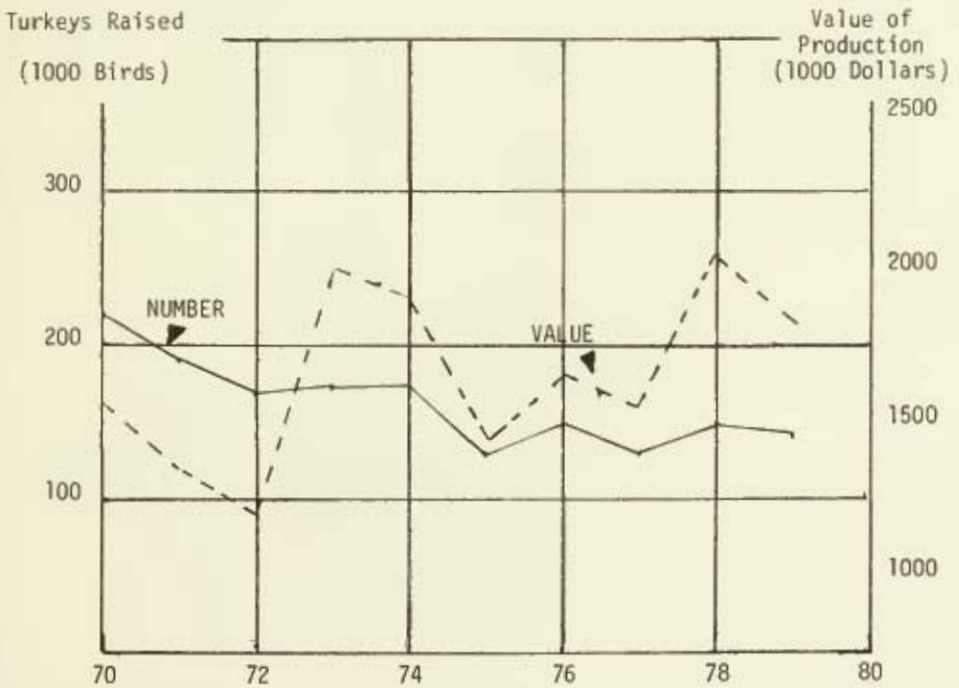
YEAR	EGGS PRODUCED	EGGS SOLD	PRICE PER DOZEN	CASH INCOME FROM SALES	GROSS INCOME
	Millions		Cents	1,000 Dollars	
1970	521	519	50.9	22,014	22,099
1971	512	511	44.5	18,949	18,986
1972	466	465	42.9	16,624	16,660
1973	393	392	62.9	20,548	20,600
1974	376	375	64.5	20,156	20,210
1975	402	401	66.2	22,122	22,177
1976	343	342	72.1	20,549	20,609
1977	355	354	69.9	20,621	20,679
1978	341	340	66.2	18,757	18,812
1979	339	338	73.8	20,787	20,849

TURKEYS: PRODUCTION, PRICE AND VALUE, MASSACHUSETTS, 1970-1979

YEAR	TURKEYS RAISED HEAVY	TURKEYS RAISED LIGHT	POUNDS PRODUCED 1/	PRICE PER POUND 2/	VALUE OF PRODUCTION
	1,000		1,000 Pounds	Cents	1,000 Dollars
1970	209	15	4,525	35.5	1,606
1971	173	19	3,840	35.5	1,363
1972	141	29	3,383	36.0	1,218
1973	144	29	3,287	62.0	2,038
1974	139	33	3,268	57.0	1,863
1975	106	19	2,375	58.0	1,378
1976	122	21	2,860	58.0	1,659
1977	110	15	2,600	58.0	1,508
1978	128	18	2,993	68.0	2,035
1979	133	7	2,800	65.0	1,820

1/ Includes home consumption.
2/ Liveweight equivalent price.

MASSACHUSETTS TURKEYS
NUMBER RAISED AND VALUE OF PRODUCTION



MISCELLANEOUS LIVESTOCK

BEE AND HONEY:

Honey production in Massachusetts totaled 396,000 pounds in 1979, 6 percent less than the previous year. The reduced production resulted from lower yield per colony, as the number of colonies remained the same, at 12,000. The price received per pound of honey was 20 cents lower in 1979 than the record high price of $1.03 in 1977 and 1978.

MINK:

Mink pelt production in Massachusetts in 1979 totaled 18,000 pelts, down 2,000 pelts from 1978. Of the pelts produced in 1979, 8.9 percent were standard; 30.0 percent were pastel; 13.9 percent were pearl; 27.2 percent were demibuff and 20.0 percent were other colors. Mink females bred to produce kits in 1980 totaled 5,200 down 100 from 1979.

BEES, HONEY AND BEESWAX: COLONIES OF BEES, PRODUCTION
PRICE PER POUND AND VALUE OF PRODUCTION, MASSACHUSETTS, 1970-1979

YEAR	COLONIES OF BEES	HONEY				BEESWAX		
		YIELD PER COLONY	PRODUC-TION	PRICE PER POUND	VALUE OF PRODUCTION	PRODUC-TION	PRICE PER POUND	VALUE OF PRODUCTION
	1,000	Lbs.	1,000 Lbs.	Cents	1,000 Dols.	1,000 Lbs.	Cents	1,000 Dols.
1970	9	24	216	39.2	85	4	75	3
1971	9	25	225	42.2	95	5	80	4
1972	9	19	171	50.0	86	3	75	2
1973	9	26	234	66.8	156	4	90	4
1974	12	16	192	81.2	156	4	110	4
1975	12	27	324	96.9	314	8	110	9
1976	12	19	228	101.0	230	4	110	4
1977	12	22	264	103.0	272	5	150	8
1978	12	35	420	103.0	433	6	160	10
1979	12	33	396	83.1	329	6	160	10

MASSACHUSETTS APIARY INSPECTION, 1978 and 1979 1/

COUNTY	COLONIES EXAMINED		COLONIES OWNED		COLONIES A.F.B.		COLONIES E.F.B.		COLONIES TREATED		COLONIES DESTROYED	
	1978	1979	1978	1979	1978	1979	1978	1979	1978	1979	1978	1979
Barnstable	0	0	596	--	--	--	--	--	--	--	--	--
Berkshire	13	20	204	20	0	0	0	0	0	0	0	0
Bristol	336	96	922	96	15	4	22	1	15	0	1	0
Essex	995	150	1825	211	10	0	0	0	10	0	1	0
Franklin	24	47	402	66	0	0	0	0	0	0	0	0
Hampden	11	0	950	--	0	--	0	--	0	--	0	--
Hampshire	3	100	548	177	0	1	0	0	0	0	0	0
Middlesex	1963	2158	5035	3628	17	35	79	81	17	70	1	0
Norfolk	404	530	1450	530	21	15	15	7	21	15	1	0
Plymouth	1479	486	2068	589	34	34	45	14	34	3	12	0
Worcester	207	306	829	330	14	0	3	1	14	0	0	0
Suffolk	6	19	6	19	0	0	0	0	0	0	0	0
STATE	5504	3912	14827	5666	111	89	164	104	111	88	16	0

1/ Massachusetts Department of Food and Agriculture--Apiary Inspection

RANCHES PRODUCING MINK PELTS
IN MASSACHUSETTS, 1971-1979

YEAR	1971	1972	1973	1974	1975	1976	1977	1978	1979
NUMBER OF RANCHES	24	18	18	15	16	9	16	16	12

MINK: FEMALES BRED TO PRODUCE KITS AND MINK PELTS
PRODUCED BY COLOR CLASS, MASSACHUSETTS, 1974-1980

COLOR CLASS	FEMALES BRED							PELTS PRODUCED					
	1974	1975	1976	1977	1978	1979	1980	1974	1975	1976	1977	1978	1979
	1,000 Females							1,000 Pelts					
Standard	.84	1.08	1.70	1.50	1/	.69	.68	1.40	1.40	1/	1/	1.50	1.60
Pastel	3.50	2.85	2.30	1.80	3.20	2.60	1.50	9.80	10.90	6.50	8.40	6.50	5.40
Pearl	.84	.99	1/	.64	1/	.80	.73	2.90	1/	1/	1/	1/	2.50
Violet Type	.76	.69	1/	1/	1/	.69	.53	1.60	1/	1/	1/	1/	1/
Demibuff							1.30	3.00	3.20	3.60	4.40	5.40	4.90
All Others	.56	.39	2.00	1.06	2.30	.62	.46	1.30	7.50	5.90	1/	1/	3.60
Total	6.50	6.00	6.00	5.00	5.70	5.40	5.20	20.00	23.00	16.00	21.00	20.00	18.00

1/ Included in All Others to avoid disclosing individual operations.

The following periodic reports and special bulletins are available upon request to:

New England Crop & Livestock Reporting Service
U.S. Department of Agriculture
P.O. Box 1444
Concord, New Hampshire 03301
(603)224-9639

Crops

Potatoes - Acres planted, August; Acreage, yield per acre and production, October, November and December.
Potato Stocks - Stocks on hand as of the first of the month, December through April. (Maine)
Tobacco - Acreage for harvest, July; Production, August through November and January final.
Prospective Plantings - Pre-planting acreage intentions for feed crops, tobacco, April.
Massachusetts Annual Crop Summary - End of season report of acreage, yield, production and value of production, January.
Fruit - Apples - Production estimated as of July 1, August 1 (including variety estimates), October 1 and January final, including variety estimates.
Peaches - June 1 and January final estimate of production
Cranberries - Production, August, October and November.
Maple Syrup - Production, May; Prices received by producers, November.
Sweet Corn - Acreage and Production, in season
Flowers and foliage plants - March.
Vegetables - Annual production, price and value, January.

Livestock and Products

Cattle Inventory and Calf Crop - January 1 cattle inventory, value; calf crop and cattle farms
Hogs and Pigs - Sows farrowed and pigs saved, June and December. December includes inventory and value
Sheep and Lambs - January 1 inventory numbers, lamb crop and values - February
Wool - Sheep shorn, weight per fleece, production, price, value, April.
Livestock Slaughter - Quarterly report on number and weight of livestock slaughtered by kinds, February, May, August and November
Milk and Feed - Number of milk cows, production (quarterly for all New England States except Vermont for which monthly estimates are published). Monthly for all states, milk price and test, hay and feed prices. Annual for all states, herd replacements, and corn, oats and hay acreages and production estimates in season.
Manufactured Dairy Products - Monthly production of manufactured dairy products.
Mink Production - Annual report of number of pelts, females bred and number of mink ranches, July.

Poultry and Eggs

Broiler Chicks - Weekly broiler chicks placed and broiler-type eggs set. (Maine)
Chicken Inventory - Chickens on farms on December 1, by class and average value of all chickens - January
Poultry Report - Egg production, layer numbers, broiler and egg type chicks hatched, poults hatched, pullet chicks hatched for hatchery supply flocks, monthly
Turkeys - Turkeys raised, August and January
Bees and Honey - Number of colonies, honey production and prices, January

Other Reports

Massachusetts Agricultural Statistics - Annual publication of all crops and livestock
Crop-Weather - Weekly summary of crop and weather conditions, May through September
Farm Income - Annual report of income from marketing of crops and livestock, August.

CROPS REVIEW

The preliminary estimate of value of production in 1979 from corn silage, hay, tobacco and potatoes totaled $52.3 million. Hay, at $20.0 million was the largest component of the total. Corn silage, at $16.6 million, was second, followed by tobacco, at $10.8 million and potatoes at $4.9 million.

CORN SILAGE:

Corn silage reached a record high production of 663,000 tons in 1979, slightly higher than the 660,000 tons produced the preceding year. Corn for silage was cut from 39,000 acres, with a yield of 17 tons per acre, equalling the record high yield set in 1969.

HAY:

Production of all hay in 1979 totaled 278,000 tons, a 6 percent increase from 1978. This hay was cut from 116,000 acres yielding an average of 2.4 tons each. Alfalfa hay, cut from 26,000 acres, yielded 2.9 tons per acre, and totaled 75,000 tons, up 10 percent from the amount produced in 1978. Hay, other than alfalfa and alfalfa mixtures, totaled 203,000 tons, an increase of 5 percent from 1978. Yield of other hay averaged 2.25 tons per acre in 1979, compared with 2.15 in 1978.

POTATOES:

Potato production during 1979, at 748,000 hundredweight, was 8 percent less than in 1978, and placed Massachusetts 22nd in the production of fall potatoes. Harvested acreage of potatoes totaled 3,400 in 1979, continuing a decline which began in the 1890's, from a level above 30,000 acres. Yield per acre, at 220 hundredweight, was slightly below the record high of 240 set in 1977. The value of production totaled $4.7 million or an average of $6.50 per hundredweight, 5 percent less than the previous year's total value of $5.1 million.

TOBACCO:

Shade tobacco production in the Commonwealth totaled 1,078,000 pounds in 1979, 4 percent less than 1978 production. Area harvested totaled 770 acres, down 10 percent from 1978. Yield was 1,400 pounds per acre, compared with 1,300 pounds the preceding year. Acres harvested, at 770 in 1979, continues a decline from the peak of 2,500 acres in 1965. At an average price of $8.50 per pound, the value of the crop totaled over $9 million, an increase of 9 percent from the 1978 value.

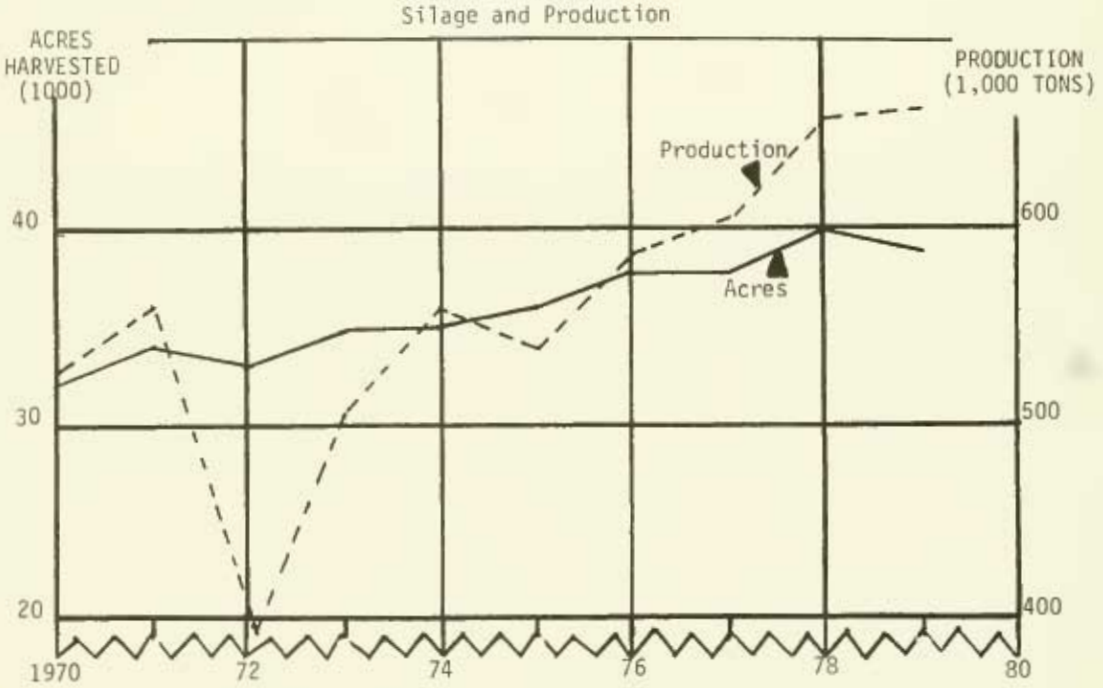
Havana seed tobacco production was estimated at 814,000 pounds in 1979, compared with 340,000 pounds in 1978. Yield, at 1,850 pounds per acre, was down from the previous year average of 2,000.

CORN: ACREAGE, YIELD AND PRODUCTION, MASSACHUSETTS, 1970 - 1979

YEAR	ACREAGE HARVESTED FOR ALL PURPOSES	HARVESTED FOR SILAGE		
		ACRES	PER ACRE	PRODUCTION
	1,000	1,000	TONS	1,000 TONS
1970	32	32	16.5	528
1971	34	34	16.5	561
1972	33	33	12.0	396
1973	35	35	14.5	508
1974	35	35	16.0	560
1975	36	35	15.0	540
1976	38	38	15.5	589
1977	38	38	16.0	608
1978	40	40	16.5	660
1979	39	39	17.0	663

MASSACHUSETTS CORN

Acres Harvested for Silage and Production

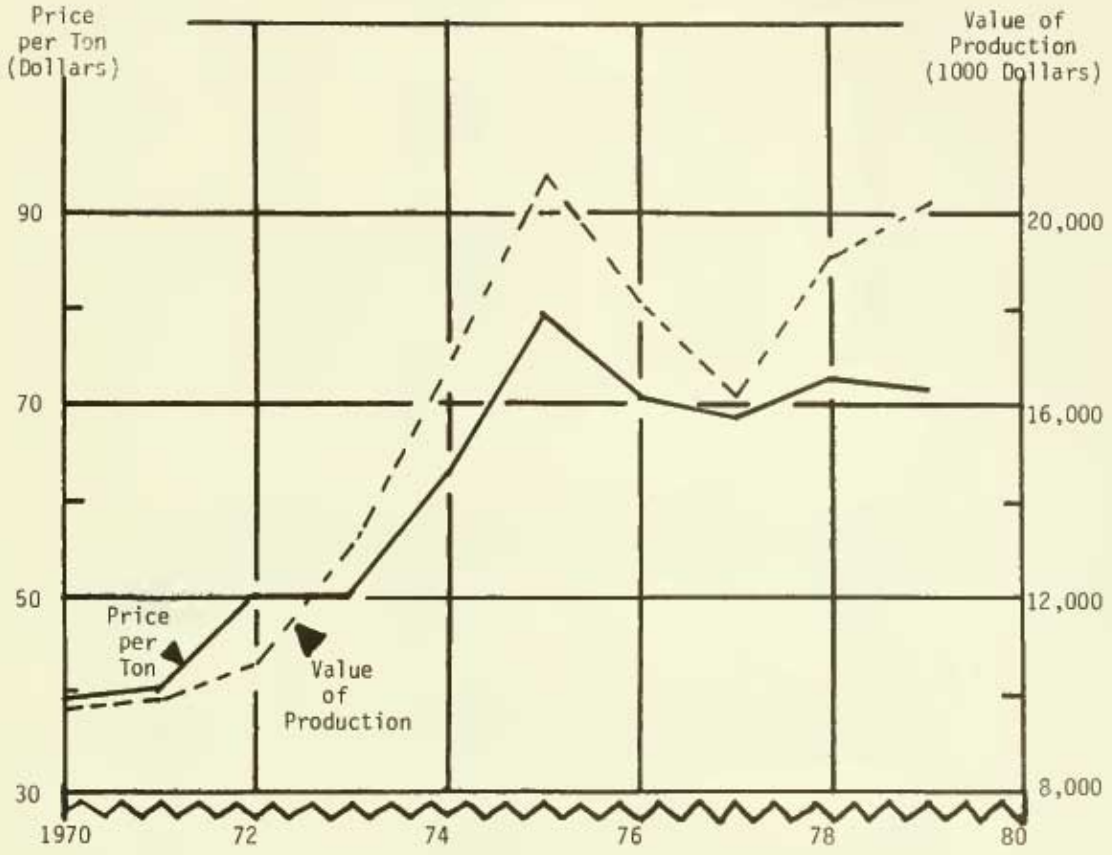


ALL HAY: ACREAGE, YIELD, PRODUCTION, PRICE AND VALUE, MASSACHUSETTS, 1970 - 1979

CROP YEAR	ACRES HARVESTED	YIELD PER ACRE	PRODUCTION	PRICE PER TON	VALUE OF PRODUCTION
	1,000	TONS	1,000 TONS	DOLLARS	1,000 DOLLARS
1970	116	2.09	242	39.00	9,438
1971	113	2.13	241	41.00	9,881
1972	111	1.87	208	50.00	10,400
1973	116	2.24	260	50.00	13,000
1974	115	2.12	244	63.00	15,327
1975	121	2.17	263	79.00	20,777
1976	121	2.10	254	71.00	18,034
1977	117	1.99	233	69.00	16,077
1978	116	2.26	262	73.00	19,126
1979	116	2.40	278	72.00	20,016

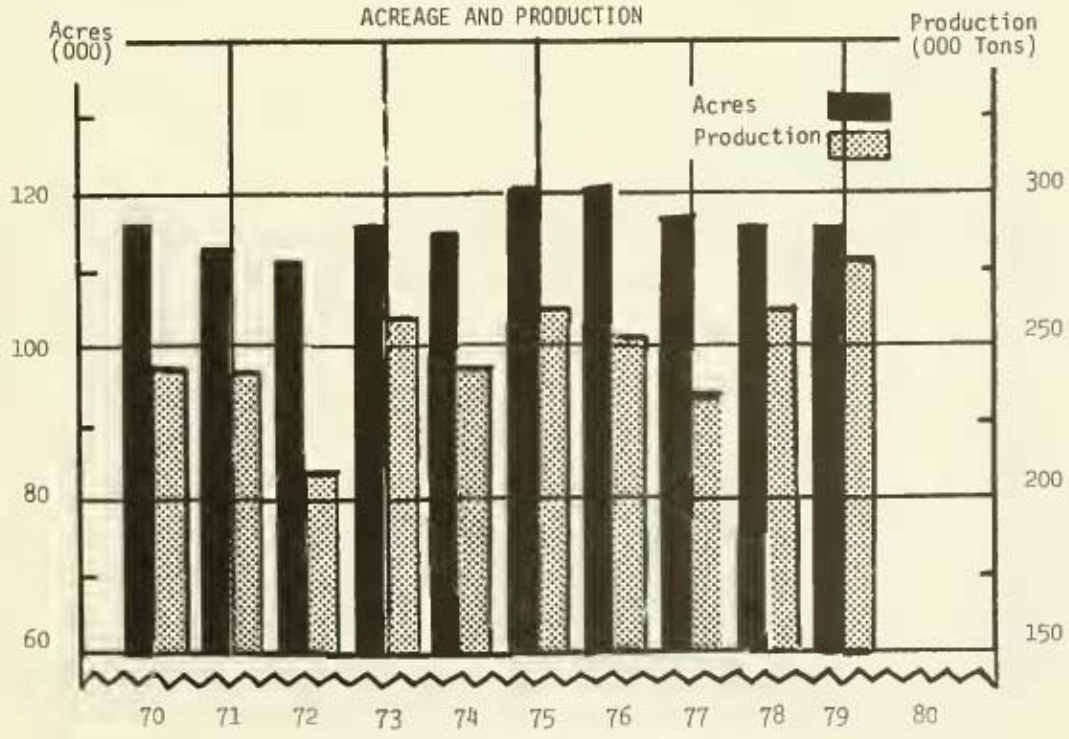
MASSACHUSETTS ALL HAY

PRICE PER TON AND VALUE OF PRODUCTION



MASSACHUSETTS ALL HAY

ACREAGE AND PRODUCTION



ALFALFA HAY: ACREAGE, YIELD AND PRODUCTION, MASSACHUSETTS 1970-1979

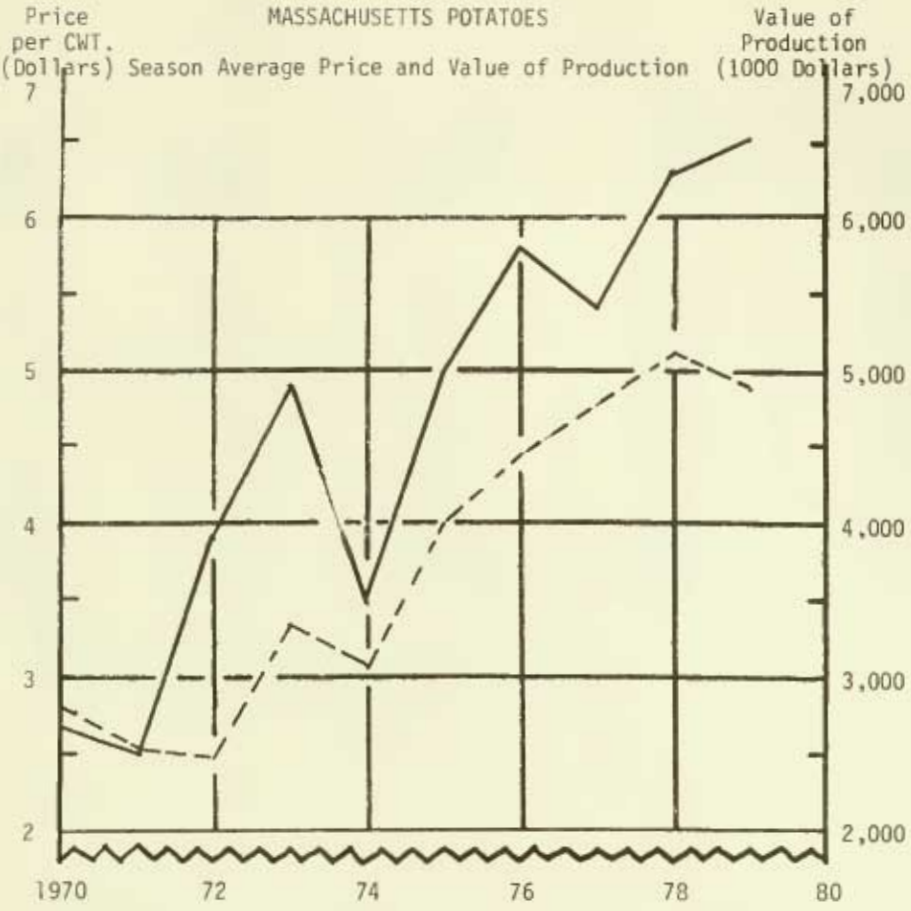
CROP YEAR	ACRES HARVESTED	YIELD PER ACRE	PRODUCTION
	1,000	TONS	1,000 TONS
1970	29	2.65	77
1971	28	2.55	71
1972	26	2.25	59
1973	26	2.55	66
1974	25	2.55	64
1975	26	2.60	68
1976	27	2.45	66
1977	25	2.30	58
1978	26	2.60	68
1979	26	2.90	75

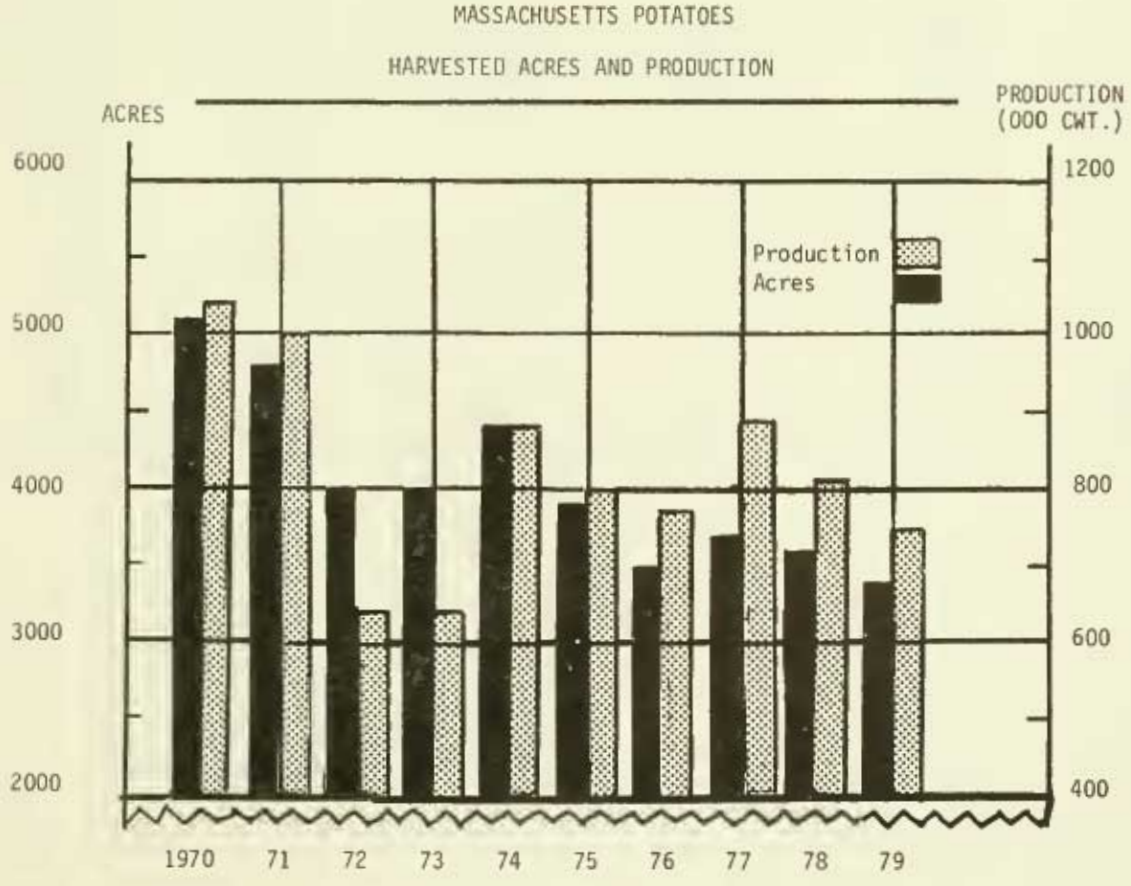
ALL OTHER HAY: ACREAGE, YIELD AND PRODUCTION, MASSACHUSETTS 1970-1979

CROP YEAR	ACRES HARVESTED	YIELD PER ACRE	PRODUCTION
	1,000	TONS	1,000 TONS
1970	87	1.90	165
1971	85	2.00	170
1972	85	1.75	149
1973	90	2.15	194
1974	90	2.00	180
1975	95	2.05	195
1976	94	2.00	188
1977	92	1.90	175
1978	90	2.15	194
1979	90	2.25	203

POTATOES: ACREAGE, YIELD, PRODUCTION, PRICE AND VALUE, MASSACHUSETTS 1970-1979

CROP YEAR	ACREAGE HARVESTED	YIELD PER ACRE	TOTAL PRODUCTION	SEASON AVG. PRICE PER CWT.	VALUE OF PRODUCTION
	ACRES	CWT.	1,000 CWT.	DOLLARS	1,000 DOLLARS
1970	5,100	205	1,046	2.69	2,814
1971	4,800	210	1,008	2.50	2,520
1972	4,000	160	640	3.90	2,496
1973	4,000	160	640	4.90	3,336
1974	4,400	200	880	3.50	3,080
1975	3,900	205	800	5.00	4,000
1976	3,500	220	770	5.80	4,466
1977	3,700	240	888	5.40	4,795
1978	3,600	225	810	6.30	5,103
1979	3,400	220	748	6.50	4,862


MASSACHUSETTS POTATOES
Price per CWT. (Dollars)
Season Average Price and Value of Production
Value of Production (1000 Dollars)
7
6
5
4
3
2
7,000
6,000
5,000
4,000
3,000
2,000
1970
72
74
76
78
80


MASSACHUSETTS POTATOES
HARVESTED ACRES AND PRODUCTION
ACRES
PRODUCTION (000 CWT.)
6000
5000
4000
3000
2000
1200
1000
800
600
400
Production
Acres
1970
71
72
73
74
75
76
77
78
79

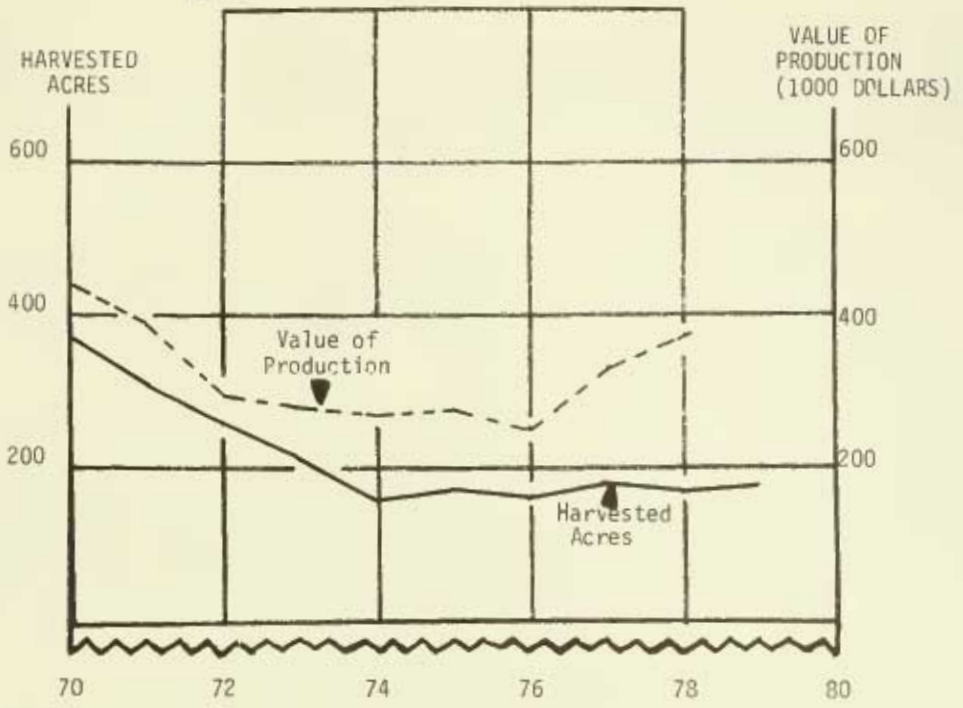
TOBACCO, SHADE TYPE: ACREAGE, YIELD, PRODUCTION, PRICE AND VALUE, MASSACHUSETTS, 1969-1979

YEAR	ACREAGE HARVESTED	YIELD PER ACRE	TOTAL PRODUCTION	PRICE PER POUND	VALUE OF PRODUCTION
	Acres	Pounds	1,000 Pounds	Dollars	1,000 Dollars
1969	1,900	1,340	2,546	4.00	10,184
1970	1,850	1,535	2,840	4.00	11,360
1971	1,300	1,725	2,243	4.00	8,972
1972	1,150	1,250	1,438	4.85	6,974
1973	1,300	1,210	1,573	5.15	8,101
1974	1,300	1,610	2,093	6.00	12,558
1975	1,250	1,335	1,669	6.40	10,682
1976	1,050	1,480	1,554	5.40	8,392
1977	980	1,600	1,568	6.00	9,408
1978	860	1,300	1,118	7.50	8,385
1979	770	1,400	1,078	8.50	9,163

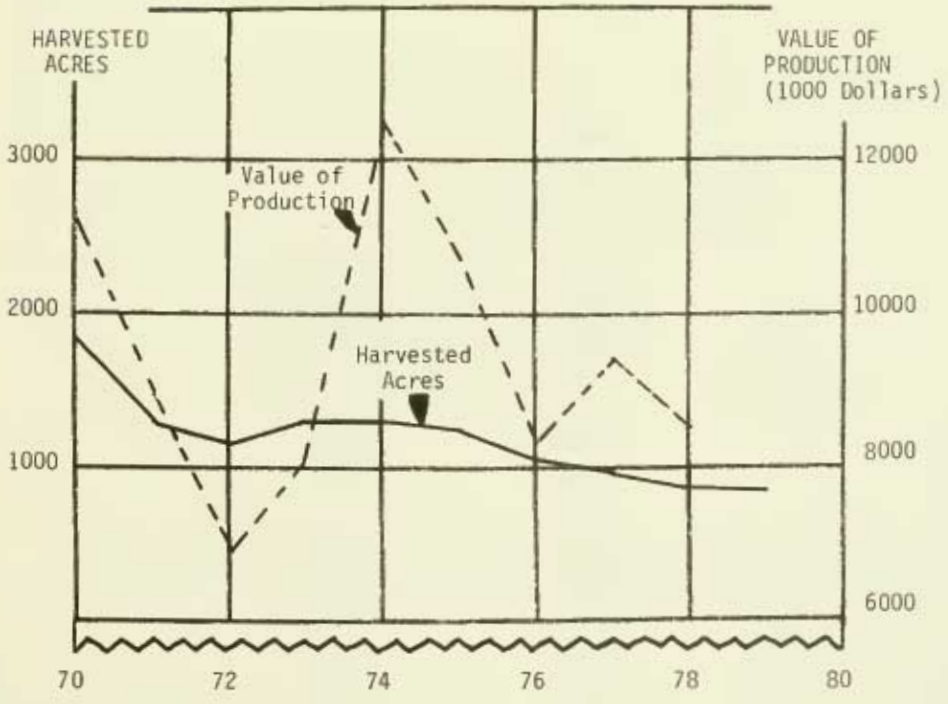
TOBACCO, HAVANA SEED: ACREAGE, YIELD, PRODUCTION, PRICE AND VALUE, MASSACHUSETTS, 1969-1979

YEAR	ACREAGE HARVESTED	YIELD PER ACRE	TOTAL PRODUCTION	PRICE PER POUND	VALUE OF PRODUCTION
	Acres	Pounds	1,000 Pounds	Dollars	1,000 Dollars
1969	400	1,520	608	0.56	340
1970	370	1,950	722	0.61	440
1971	310	2,050	636	0.61	388
1972	260	1,850	481	0.62	298
1973	210	1,850	389	0.72	280
1974	160	2,040	326	0.82	267
1975	170	1,650	281	0.98	275
1976	160	1,819	291	0.87	253
1977	180	1,880	338	0.98	331
1978	170	2,000	340	1.10	374
1979	440	1,850	814	1.20	977

MASSACHUSETTS HAVANA SEED TOBACCO
ACRES HARVESTED AND VALUE OF PRODUCTION



MASSACHUSETTS SHADE TOBACCO
ACRES HARVESTED AND VALUE OF PRODUCTION



APPLES:

Bay State orchards produced 95 million pounds (2,262,000 42 pound units) of apples. This was 10 percent less than the 1978 total of 105 million pounds. At an average price of 15.5 cents per pound, the value of the crop was $14,725,000, an increase of 2 percent from the value of the 1978 crop.

PEACHES:

The production of peaches in 1979 totaled 69,000 48 pound units, a 5 percent decrease from the 1977 and 1978 totals. Because of higher price, $15.36 per 48 pounds, compared with $13.92 in 1978, the value of production increased 4 percent to $1,056,000.

CRANBERRIES:

Cranberry production totaled 1,080,000 barrels in 1979, a decrease of 8 percent from the record production in 1978 of 1,180,000 barrels. At an average price of $25.90 per barrel, the value of production was nearly $28 million, a 10 percent increase from the value of the 1978 crop, and set a new record.

TOMATOES:

A total of 118,000 hundredweight of tomatoes were grown in 1979, a 16 percent decrease from the 1978 total. Although the average price of $24.60 per hundredweight was higher than the 1978 average, it was not enough to offset the decline in production, thus the 1979 value of production of $2,903,000 was 6 percent less than in 1978.

SWEET CORN:

Sweet corn production at 580,000 hundredweight in 1979 was 1 percent higher than in 1978. Because of a higher average price, $8.99 per cwt., the value of production was $5,214,000, a 30 percent increase from the 1978 value.

PEACHES: PRODUCTION, PRICE AND VALUE,
MASSACHUSETTS, 1970-1979

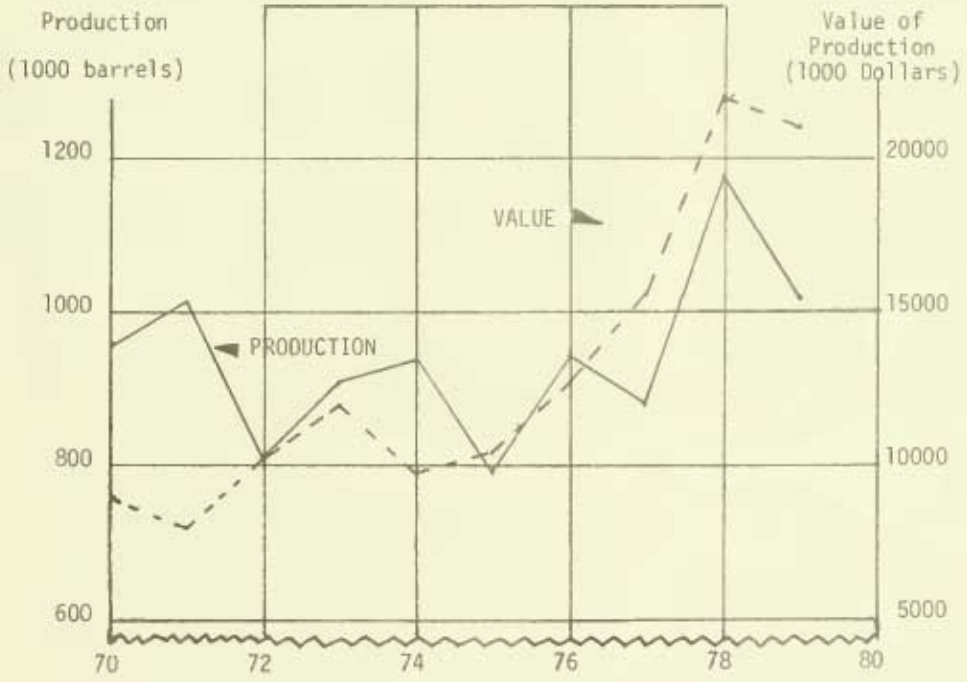
YEAR	PRODUCTION	PRICE PER UNIT	VALUE OF PRODUCTION
	1,000 48 POUND UNITS	DOLLARS	1,000 DOLLARS
1970	73	5.27	385
1971	79	5.05	399
1972	35	8.26	289
1973	58	9.66	560
1974	35	8.74	306
1975	85	9.64	820
1976	69	12.44	858
1977	73	10.55	770
1978	73	13.90	1015
1979	69	15.30	1056

CRANBERRIES: ACREAGE, YIELD, PRODUCTION, UTILIZATION, PRICE AND VALUE, MASSACHUSETTS, 1969-1979

YEAR	ACRES	YIELD PER ACRE	PRODUCTION 1/	FRESH SALES	SOLD FOR PROCESSING	SHRINKAGE 2/	SEASON AVERAGE PRICE PER BARREL 3/	VALUE
		BARRELS	1,000 BARRELS		1,000 BARRELS		DOLLARS	1,000 DOLS.
1970	11,200	85.4	957	210	607	47	10.70	9,245
1971	11,200	95.7	1,072	239	441	57	10.70	7,886
1972	11,200	73.1	819	170	600	49	12.60	10,319
1973	11,200	80.4	901	246	563	92	13.60	12,254
1974	11,200	83.2	932	167	491	274	10.70	9,972
1975	11,200	70.1	785	162	508	115	13.00	10,205
1976	11,200	83.5	935	220	630	85	13.40	12,529
1977	11,200	78.1	875	207	576	92	17.70	15,488
1978	11,200	105.4	1,180	247	833	100	21.60	25,488
1979	11,200	96.4	1,080	130	880	70	25.90	27,972

1/ Differences between production and the totals of fresh, sales and sales for processing are economic abandonment.
2/ Berries paid for by processors and lost because of dehydration and berry breakdown after delivery.
3/ Equivalent return at first delivery point, screen basis.

MASSACHUSETTS CRANBERRIES
Production and Value of Production



APPLES: PRODUCTION, PRICE AND VALUE, MASSACHUSETTS, 1970-1979

YEAR	PRODUCTION 1/			PRICE PER UNIT	VALUE OF UTILIZED PRODUCTION
	TOTAL	NOT UTILIZED 2/	HAVING VALUE		
	1,000 42 POUND UNITS			DOLLARS	1,000 DOLS.
1970	2,619	52	2,567	2.65	6,802
1971	2,738	238	2,500	2.75	6,878
1972	2,167	---	2,167	3.90	8,454
1973	1,976	---	1,976	5.59	11,039
1974	2,548	167	2,381	4.33	10,300
1975	2,500	167	2,333	4.37	10,192
1976	2,262	---	2,262	6.13	13,870
1977	2,262	72	2,190	5.38	11,776
1978	2,500	---	2,500	5.80	14,490
1979	2,262	---	2,262	6.13	13,870

1/ Estimates relate to production in orchards of 100 or more trees.
2/ Abandoned because of economic reasons.

COMMERCIAL APPLE PRODUCTION BY VARIETY, MASSACHUSETTS, 1969-1979

YEAR	CORTLAND	DELICIOUS	GOLDEN DELICIOUS	MCINTOSH	NO. SPY	ROME BEAUTY	OTHER	TOTAL PRODUCTION
				MILLION POUNDS				
1969	9.8	9.7	1.2	62.7	1.9	1.9	12.8	100.0
1970	8.1	11.4	1.4	68.8	1.8	1.8	16.7	110.0
1971	10.5	13.7	1.6	73.4	1.1	2.4	12.3	115.0
1972	5.2	10.4	1.5	62.2	0.6	0.7	10.4	91.0
1973	7.9	11.1	1.4	51.9	0.7	1.7	8.3	83.0
1974	6.0	10.9	1.7	74.1	0.9	1.9	11.5	107.0
1975	8.6	12.3	1.3	67.8	0.7	1.8	12.5	105.0
1976	8.8	12.1	2.3	57.1	0.9	1.9	11.9	95.0
1977	8.2	10.6	1.5	61.4	0.7	1.6	11.0	95.0
1978	7.2	13.9	1.6	64.6	0.9	1.3	15.5	105.0
1979	7.6	13.8	1.7	59.0	0.6	1.3	11.0	95.0

SWEET CORN: ACREAGE, YIELD, PRODUCTION, PRICE AND VALUE, MASSACHUSETTS 1970-1979

CROP YEAR	ACRES HARVESTED	YIELD PER ACRE	TOTAL PRODUCTION	AVG. PRICE PER CWT.	VALUE OF PRODUCTION
		CWT.	1,000 CWT.	DOLLARS	1,000 DOLLARS
1970	7,800	75	585	6.01	3,516
1971	8,200	78	640	6.22	3,981
1972	7,100	75	533	6.93	3,694
1973	8,000	78	624	6.20	3,869
1974	8,200	62	508	8.90	4,521
1975	8,200	81	664	7.10	4,714
1976	7,400	72	533	7.71	4,109
1977	7,200	60	432	8.90	3,845
1978	6,500	88	572	7.00	4,004
1979	6,900	84	580	8.99	5,214

TOMATOES: ACREAGE, YIELD, PRODUCTION, PRICE AND VALUE, MASSACHUSETTS 1970-1979

CROP YEAR	ACRES HARVESTED	YIELD PER ACRE	TOTAL PRODUCTION	AVG. PRICE PER CWT.	VALUE OF PRODUCTION
		CWT.	1,000 CWT.	DOLLARS	1,000 DOLLARS
1970	750	190	143	12.50	1,788
1971	750	200	150	12.50	1,875
1972	700	190	133	17.70	2,354
1973	730	195	142	17.40	2,471
1974	700	175	123	16.50	2,030
1975	630	210	132	18.00	2,376
1976	620	195	121	21.40	2,589
1977	660	190	125	20.40	2,550
1978	670	210	141	21.80	3,074
1979	620	190	118	24.60	2,903

MAPLE SYRUP

The 1979 Maple Syrup production in Massachusetts totaled 30,000 gallons, compared with 28,000 gallons in 1978. The weather during the season was characterized by warm periods of a few days duration, followed by cold for a few days, and lacked the warm days and cold nights needed for good sap runs. The season opened about March 5 and closed about April 5, a few days earlier and longer than the 1978 season. The quality of syrup made in 1979 was below normal and the color was medium compared with medium to light in 1978.

The price of maple syrup continues to increase, reaching $15.90 per gallon, 13 percent above the 1978 price. With the price doubling during the past 10 years, a new record high value of production was set for the 1979 crop of $477,000.

MAPLE SYRUP: PRODUCTION, DISPOSITION, PRICE AND VALUE, MASSACHUSETTS 1970-1979

YEAR	PRODUCTION	SOLD	SEASON AVERAGE PRICE PER GALLON	VALUE OF PRODUCTION
	1,000 GALLONS		DOLLARS	1,000 DOLS.
1970	32	31	6.70	214
1971	25	24	7.80	195
1972	28	27	8.70	244
1973	20	19	9.40	188
1974	25	24	11.20	280
1975	31	30	10.70	332
1976	27	25	12.75	319
1977	27	25	13.00	351
1978	28	26	14.10	367
1979	30		15.90	477

MAPLE SYRUP PRICES: BY TYPE OF SALE AND SIZE OF CONTAINER

YEAR	RETAIL					WHOLESALE					ALL SALES EQUIVALENT PER GALLON
	GAL.	½GAL.	QUART	PINT	½PINT	GAL.	½GAL.	QUART	PINT	½PINT	
	DOLLARS										
1971	7.40	4.00	2.40	1.50	1.05	6.60	3.65	2.30	1.35	.85	7.80
1972	8.10	4.55	2.75	1.90	1.15	7.30	4.30	2.60	1.55	1.00	8.70
1973	9.00	5.00	3.10	2.25	1.25	8.30	4.60	2.85	1.80	1.10	9.40
1974	10.50	5.90	3.55	2.30	1.40	9.00	5.00	3.00	1.85	1.20	11.20
1975	11.10	6.20	3.75	2.50	1.50	10.00	5.45	3.30	2.05	1.15	10.70
1976	11.65	6.45	3.90	2.55	1.50	10.35	5.75	3.35	2.20	1.35	12.75
1977	12.30	6.90	4.05	2.65	1.80	11.20	6.05	3.70	2.40	1.50	14.20
1978	13.10	7.40	4.29	2.81	1.86	11.66	6.59	3.79	2.41	1.49	14.10
1979	14.88	8.37	4.84	3.12	2.13	12.53	7.13	4.09	2.66	1.77	15.90

FOLIAGE PLANTS FOR INDOOR OR PATIO USE: NUMBER OF PRODUCERS, SQUARE FEET IN PRODUCTION, NEW VALUE OF SALES, MASSACHUSETTS, 1972-1979

YEAR	NUMBER OF PRODUCERS	SQUARE FEET IN PRODUCTION	AVERAGE VALUE PER SQUARE FOOT	PERCENTAGE OF SALES AT WHOLESALE	NET VALUE OF SALES 1/
		1,000 Sq. Ft.			1,000 Dollars
1972	46	246	3.52	95	865
1973	35	175	3.34	89	584
1974	76	581	5.24	76	3,203
1975	135	1,040	4.49	55	4,670
1976	131	965	4.92	62	4,743
1977	112	926	6.00	30	5,555
1978	127	927	5.36	56	4,970
1979	104	715	6.31	75	4,513

1/ Gross value of sales less cost of plant material purchased from other growers for growing on.

REPORTED TOTAL AVERAGE AREA USED FOR PRODUCTION AND DERIVED AVERAGE VALUE PER UNIT: CARNATIONS, CHRYSANTHEMUMS, POTTED LILLIES AND POTTED POINSETTIAS, MASSACHUSETTS, 1974-1979 1/

YEAR	CARNATIONS		CHRYSANTHEMUMS			POTTED LILLIES	POTTED POINSETTIAS
	STANDARD	MINIATURE	STANDARD	POMPON	POTTED		
			1,000 Square Foot Production Area				
1974			475	425	325		
1975	333	178	425	400	723		
1976	342	209	341	417	576	336	952
1977	238	123	296	445	309	367	813
1978	149	132	257	366	427	295	1,009
1979	88	98	225	292	501	294	1,044
			Average Value Per Square Foot - Dollars				
1974			1.57	1.14	2.30		
1975	2.05	2.31	1.71	1.44	2.09		
1976	2.31	1.81	2.31	1.46	2.46	2.69	1.86
1977	2.43	2.07	2.43	1.32	2.79	2.19	1.86
1978	1.50	2.58	2.56	1.77	2.45	2.62	2.04
1979	2.74	3.04	2.90	2.05	2.98	3.44	2.04

1/ Value figures for all plants are equivalent wholesale value of all sales.

CUT FLOWERS: NUMBER OF PRODUCERS, PRODUCTION, SALES, PRICE & VALUE, MASSACHUSETTS, 1972-1979

TYPE AND CROP YEAR	PRODUCERS 2/	SALES	PERCENTAGE OF SALES AT WHOLESALE	WHOLESALE PRICE	VALUE OF SALES AT 1/ WHOLESALE
	Number	1,000 Blooms	Percent	Cents	1,000 Dollars
STANDARD CARNATIONS					
1972	64	14,580	94	10.5	1,531
1973	58	11,140	93	11.1	1,237
1974	45	9,403	75	11.1	1,044
1975	34	5,549	65	12.3	683
1976	27	5,853	93	10.3	603
1977	24	3,851	89	11.2	431
1978	19	1,603	92	14.0	224
1979	14	1,238	84	20.0	241
MINIATURE CARNATIONS		1,000 Bunches			
1972	27	218	91	118	257
1973	26	271	83	125	339
1974	27	278	50	120	334
1975	23	273	65	151	412
1976	24	256	83	148	379
1977	20	222	89	115	255
1978	15	252	99	135	340
1979	15	175	96	170	298
HYBRID TEA ROSES		1,000 Blooms			
1972	11	17,144	99	18.7	3,206
1973	11	14,161	99	18.9	3,243
1974	9	19,708	97	21.0	4,139
1975	9	13,483	69	23.9	3,222
1976	10	12,636	100	19.7	2,489
1977	13	10,575	100	26.2	2,771
1978	9	12,514	99	26.0	3,254
1979	11	13,651	99	24.4	3,331
MINIATURE OR SWEETHEART ROSES					
1972	8	9,432	99	11.7	1,104
1973	8	9,635	100	11.4	1,098
1974	9	8,930	97	14.7	1,313
1975	9	9,114	72	11.7	1,066
1976	9	6,174	100	12.5	772
1977	9	6,537	100	16.3	1,066
1978	9	5,401	99	17.0	918
1979	8	7,020	99	17.3	1,214
STANDARD CHRYSANTHEMUMS					
1972	100	3,477	91	27.4	953
1973	88	2,983	81	29.9	892
1974	52	2,412	92	31.0	748
1975	54	2,341	92	31.1	728
1976	70	1,774	85	44.5	789
1977	58	1,721	92	41.7	718
1978	57	1,545	90	42.5	657
1979	53	1,355	83	48.1	652

CUT FLOWERS: NUMBER OF PRODUCERS, PRODUCTION, SALES, PRICE & VALUE, MASSACHUSETTS, 1972-1979, CONT.

TYPE AND CROP YEAR	PRODUCERS 2/	SALES	PERCENTAGE OF SALES AT WHOLESALE	WHOLESALE PRICE	VALUE OF SALES AT 1/ WHOLESALE
	Number	1,000 Bunches	Percent	Cents	1,000 Dollars
POMPON CHRYSANTHEMUMS					
1972	132	577	69	121	698
1973	115	558	55	128	714
1974	70	371	68	131	486
1975	102	377	67	153	577
1976	87	367	71	166	609
1977	89	356	54	165	587
1978	75	360	77	180	648
1979	60	338	58	177	598
POTTED CHRYSANTHEMUMS		1,000 Pots			
1972	61	369	88	207	764
1973	59	414	83	184	762
1974	60	503	68	193	971
1975	111	747	79	202	1,509
1976	115	609	78	233	1,419
1977	85	421	78	205	863
1978	87	402	63	260	1,045
1979	93	562	70	266	1,495
SNAPDRAGONS		1,000 Stems			
1976	52	2,651	88	16.8	445
1977	50	1,792	89	19.7	353
1978	57	1,674	90	20.0	335
1979	40	1,416	88	20.3	287
POTTED GERANIUMS		1,000 Pots			
1976	242	5,755	82	88	5,064
1977	225	3,183	52	75	2,387
1978	230	3,125	66	85	2,656
1979	220	3,631	61	91	3,304
POTTED LILLIES		1,000 Pots		Dollars	
1976	111	364	87	2.48	903
1977	108	322	80	2.50	805
1978	101	258	73	3.00	774
1979	93	329	78	3.07	1,010
POTTED POINSETTIAS					
1976	146	634	79	2.79	1,769
1977	139	741	68	2.05	1,519
1978	136	750	67	2.75	2,063
1979	120	751	75	2.83	2,125

1/ Equivalent wholesale value of all sales.
2/ Beginning with 1974, number of producers is number who produce and sell $10,000 or more of fresh (cut) flowers, flowering and foliage plants, bedding plants and cultivated florist greens. Previously, the definition included growers who sold $2,000 or more of the above mentioned items.

MASSACHUSETTS NURSERY AND GREENHOUSE INSPECTION
1974-1979

CATEGORY	1974	1975	1976	1977	1978	1979
Number of nurseries inspected	494	413	503	505	367	374
Acres of nurseries inspected	3,439	2,894	2,993	3,004	3,121	3,152
Number of greenhouses inspected	76	80	85	87	89	91
Sq. feet of greenhouses under glass* (000)	1,971	2,202	2,272	2,338	2,309	2,319

NUMBER OF FAIRS AND ATTENDANCE: MASSACHUSETTS, 1970-1979

YEAR	NUMBER OF FAIRS	ATTENDANCE
1970	131	2,247,387
1971	130	1,895,067
1972	124	2,246,242
1973	121	1,592,995
1974	131	2,646,493
1975	131	2,945,841
1976	134	2,762,597
1977	129	2,954,530
1978	124	2,500,000
1979	133	2,090,356

FERTILIZER CONSUMPTION: BY KINDS AND OF PRIMARY NUTRIENTS, MASSACHUSETTS, 1970-1979

YEAR ENDED JUNE 30	KIND OF FERTILIZER				PRIMARY NUTRIENTS		
	MIXED FERTILIZER	PRIMARY NUTRIENTS MATERIALS	SECONDARY & MICRO-NUTRIENTS	TOTAL FERTILIZER	N	AVAILABLE P_2O_5	K_2O
	Tons				Tons		
1970	52,953	16,580	63	69,596	8,159	6,325	6,071
1971	47,774	23,298	51	71,123	7,727	6,842	5,514
1972	54,997	17,183	54	72,234	8,853	6,295	6,126
1973	59,643	17,045	50	76,738	10,095	7,726	6,899
1974	61,540	15,810	23	77,373	8,999	7,031	7,246
1975	51,814	15,216	36	67,066	7,866	5,588	6,049
1976	55,548	15,335	150	71,033	8,803	5,984	6,779
1977	53,094	14,882	28	68,004	9,015	5,872	6,607
1978	71,471	14,970	62	86,503	11,501	7,644	8,552
1979	58,397	11,393	224	70,014	10,275	6,220	7,530

FARMS: NUMBER AND ACREAGE, MASSACHUSETTS, 1970 - 1979

Year	Number	Average Size	Land in Farms
		Acres	Acres
1970	6,200	121	750,000
1971	5,900	122	720,000
1972	5,700	123	700,000
1973	5,500	124	680,000
1974	5,500	124	680,000
1975	5,800	121	700,000
1976	6,300	111	700,000
1977	6,200	111	690,000
1978	5,900	115	680,000
1979	6,200	110	680,000

PRICES PAID BY FARMERS: INDEX NUMBERS, ANNUAL AVERAGE, UNITED STATES 1960-1979, BY YEARS (1967=100)

YEAR	COMMODITIES AND SER., INTEREST TAXES & WAGE RATES	FAMILY LIVING AND PRODUCTION ITEMS	FAMILY LIVING ITEMS	PRODUCTION ITEMS	INTEREST PAYABLE PER ACRE	TAXES PAYABLE PER ACRE	WAGE RATES FOR HIRED FARM LABOR 1/
1960	88	91	90	92	45	69	74
1961	88	92	90	93	50	73	76
1962	90	92	91	94	55	77	78
1963	91	94	92	95	62	79	80
1964	92	93	93	94	70	82	82
1965	94	96	95	94	79	87	86
1966	99	99	98	100	90	94	93
1967	100	100	100	100	100	100	100
1968	103	102	104	100	112	110	108
1969	108	106	109	104	125	120	119
1970	112	110	114	108	134	129	128
1971	118	115	118	113	142	136	134
1972	125	122	123	121	156	142	142
1973	144	142	133	146	184	145	155
1974	164	161	151	166	223	154	178
1975	180	177	166	182	262	166	192
1976	192	187	176	193	299	178	210
1977	202	196	181	200	339	195	226
1978	219	212	194	217	400	210	242
1979	250	241	215	248	501	226	265

1/ Simple average of quarterly indexes seasonally adjusted.

INDEX NUMBERS OF PRICES RECEIVED BY FARMERS, BY COMMODITY GROUPS, UNITED STATES ANNUAL AVERAGE, 1960-1978 (1967=100)

YEAR	CROPS								LIVESTOCK & PRODUCTS				ALL FARM PRODUCTS
	FOOD GRAINS	FEED GRAINS AND HAY	TOBACCO	COTTON	OIL BEARING CROPS	FRUIT	COMMERCIAL VEGETABLES	ALL CROPS	DAIRY PRODUCTS	POULTRY AND EGGS	MEAT ANIMALS	ALL LIVESTOCK	
1960	115	87	90	133	77	100	82	99	85	121	88	91	94
1961	118	87	95	137	93	101	79	100	85	111	89	91	94
1962	128	89	96	142	90	95	88	103	83	110	92	92	96
1963	126	95	89	142	94	120	83	106	83	111	86	89	96
1964	107	96	88	137	93	125	88	106	84	108	80	85	93
1965	93	100	92	129	98	106	93	103	85	110	94	94	98
1966	105	104	99	113	109	109	101	106	96	120	105	106	106
1967	100	100	100	100	100	100	100	100	100	100	100	100	100
1968	91	90	102	101	96	134	108	100	105	107	103	104	102
1969	88	96	107	91	93	101	106	97	109	120	119	117	107
1970	92	103	109	96	99	96	103	100	113	112	121	118	110
1971	95	108	113	108	111	108	114	108	117	102	121	118	113
1972	109	101	123	129	122	117	115	114	121	105	148	136	125
1973	215	163	129	144	226	137	134	175	143	176	198	183	179
1974	300	249	148	228	232	141	143	224	166	163	165	165	192
1975	242	232	162	183	197	138	162	201	175	179	169	172	185
1976	202	214	163	265	205	129	161	197	192	178	170	177	186
1977	156	181	175	270	243	163	176	192	193	174	168	175	183
1978	191	184	191	245	226	224	185	203	210	185	226	217	210
1979	229	207	207	258	249	240	194	223	239	192	280	257	241

FARM PRODUCTION EXPENSES: MASSACHUSETTS, 1969-1978

CURRENT FARM OPERATING EXPENSES

YEAR	FEED	LIVE-STOCK	SEED 1/	FERTILIZER AND LIME	REPAIRS AND OPERATION OF CAPITAL ITEMS 2/	MISCELLANEOUS 3/	HIRED LABOR 4/
				Million Dollars			
1969	27.2	4.7	3.0	3.9	12.8	16.7	32.0
1970	28.9	4.0	3.1	3.6	13.0	17.3	32.0
1971	27.6	3.9	3.2	3.7	13.6	18.4	33.4
1972	25.8	4.2	3.4	3.9	13.2	20.0	33.2
1973	37.2	4.7	4.2	5.6	14.1	20.9	38.8
1974	47.3	3.2	5.5	8.5	17.1	24.4	37.1
1975	45.0	2.4	5.4	6.8	19.6	27.2	37.2
1976	44.8	2.7	6.3	6.2	24.3	27.4	40.4
1977	41.6	3.7	6.7	5.8	26.4	28.5	46.1
1978	37.4	3.3	7.3	8.1	28.1	31.5	48.9

1/ Includes bulbs, plants and trees.

2/ Repairs and maintenance of buildings, repairs and operation of motor vehicles and other machinery, and petroleum fuel and oil used in the farm business.

3/ Includes binding, cotton ginning, Federal crop insurance, containers, dairy supplies, electricity, greenhouse and nursery, grazing fees, harness & saddlery, net insurance premiums (fire, wind and crop hail), irrigation, livestock marketing service (excl. feed and transportation), milk hauling, miscellaneous hardware (incl. blacksmithing), machine hire and custom work, miscellaneous livestock and poultry supplies, pesticides, small hand tools, short term interest, telephones (business share), vet. services and medicines (plus insem.) and other miscellaneous.

4/ Includes cash wages, perquisites, and Social Security taxes paid by employers.

FARM PRODUCTION EXPENSES: MASSACHUSETTS, 1969-1978

YEAR	TOTAL CURRENT FARM OPERATING EXPENSES	DEPRE-CIATION 1/	TAXES ON FARM PROPERTY	INTEREST ON FARM MORTGAGE DEBT	NET RENT TO NONFARM LANDLORDS 2/	TOTAL PRODUCTION EXPENSES
			Million Dollars			
1969	100.3	18.4	9.9	2.2	-1.0	129.8
1970	102.0	18.7	10.4	2.4	-1.1	132.4
1971	103.8	20.5	11.3	2.6	-1.3	137.0
1972	103.8	21.0	11.7	3.0	-1.3	138.2
1973	125.4	22.2	12.8	3.6	-1.5	162.6
1974	142.9	25.6	12.6	4.5	-1.5	184.1
1975	143.7	29.6	13.3	5.8	-1.2	191.2
1976	152.2	31.9	14.1	6.5	-1.0	203.7
1977	159.0	33.7	15.4	5.9	-1.0	213.0
1978	164.5	37.0	16.4	6.0	- .9	223.0

1/ Includes depreciation and accidental damage to farm buildings and depreciation of motor vehicles and other farm machinery and equipment.

2/ Minus sign reflects a net income position rather than a net expense position.

CASH RECEIPTS FROM FARM MARKETING AND GOVERNMENT PAYMENTS, MASSACHUSETTS 1950-1978

Year	Cash Income From Farm Marketing			Government Payments	Total Marketings & Government Payments
	Crops	Livestock & Livestock Products	Total Crops and Livestock		
			(000) Dollars		
1950	54,652	126,957	181,609	559	182,168
1955	52,897	119,563	172,460	438	172,898
1960	60,121	104,608	164,729	672	165,401
1965	69,124	91,117	160,241	645	160,886
1970	71,590	85,340	156,930	619	157,549
1975	100,904	100,594	201,498	593	202,091
1976	110,269	109,106	219,375	599	219,974
1977	118,699	105,056	223,755	579	224,330
1978	129,897	112,109	242,006	773	242,779

REALIZED GROSS AND NET INCOME FROM FARMING: MASSACHUSETTS, 1950-1978

	1950	1955	1960	1965	1970	1975	1976	1977	1978
					Million Dollars				
Cash Receipts From Farm Marketing	181.6	172.5	164.7	160.2	156.9	201.5	219.4	223.8	242.0
Government Payments	.6	.4	.7	.6	.6	.6	.6	.6	.8
Non-Money Income	19.3	15.4	15.5	12.3	13.3	21.3	23.2	25.2	26.3
Other Farm Income	.1	.6	.7	1.2	1.5	3.2	3.5	4.0	4.4
Gross Farm Income	201.6	188.9	181.6	174.5	172.3	226.5	246.6	253.5	273.5
Farm Production Expenses	147.2	138.3	135.6	127.4	132.0	191.2	203.7	213.0	223.0
Realized Net Farm Income	54.4	50.7	46.1	47.0	40.4	35.3	42.9	40.5	50.5
Net Change Farm Inventories	-2.1	-1.2	1.3	-.5	.2	-1.3	4.1	-32.2	1.2
Total Net Farm Income	52.3	49.5	47.3	46.5	40.6	34.1	47.0	8.3	51.7
Estimated Number Farms (000)	29.1	18.0	13.0	8.7	6.2	5.5	5.4	5.3	4.8
Average Net Farm Income (dollars)	1,797	2,750	3,639	5,345	6,548	6,200	8,704	1,566	10,771

UNITED STATES: CIVILIAN PER CAPITA CONSUMPTION OF MAJOR FOOD COMMODITIES, 1970-1979 1/

Commodity	1970	1973	1974	1975	1976	1977	1978 2/	1979 2/
				Pounds				
Meats:	151.4	142.6	152.5	145.4	155.3	154.6	149.7	147.7
Beef	84.1	81.1	86.4	88.9	95.7	93.2	88.9	79.6
Veal	2.4	1.5	1.9	3.5	3.3	3.2	2.5	1.7
Lamb and mutton	2.9	2.4	2.0	1.8	1.7	1.5	1.4	1.4
Pork	62.0	57.6	62.2	51.2	54.6	56.7	56.9	65.0
Fish (edible weight)	11.8	12.9	12.2	12.3	13.0	12.8	13.4	13.7
Poultry Products:								
Eggs	39.5	37.3	36.6	35.4	34.8	34.5	35.2	35.7
Chicken (ready-to-cook)	40.5	40.7	41.1	40.6	43.3	44.9	47.7	51.8
Turkey (ready-to-cook)	8.0	8.5	8.9	8.6	9.2	9.2	9.4	10.2
Dairy Products:								
Cheese	11.5	13.7	14.6	14.5	15.8	16.4	17.3	18.1
Condensed and evaporated milk	7.1	6.0	5.6	5.0	5.0	4.5	4.2	4.4
Fluid milk and cream (product weight)	296.0	293.0	288.0	291.1	292.0	288.4	285.9	284.2
Ice cream (product weight)	17.7	17.5	17.5	18.7	18.1	17.7	17.8	17.7
Fats and Oils--Total Fat Content	53.0	54.3	53.2	53.4	56.1	54.4	55.6	57.6
Butter (actual weight)	5.3	4.8	4.6	4.8	4.4	4.4	4.5	4.5
Margarine (actual weight)	11.0	11.3	11.3	11.2	12.2	11.6	11.4	11.6
Lard	4.7	3.4	3.2	3.0	2.7	2.3	2.2	2.3
Shortening	17.3	17.3	17.0	17.3	18.1	17.6	18.2	19.2
Other edible fats and oils	18.2	20.8	20.3	20.3	22.0	21.6	22.6	23.4
Fruits:								
Fresh	79.3	74.2	76.9	81.3	83.7	79.6	81.6	80.5
Citrus	28.1	26.9	27.1	28.7	28.5	25.2	26.3	24.3
Noncitrus	51.2	47.3	49.8	52.6	55.2	54.4	55.3	56.2
Processed:								
Canned fruit	23.3	21.3	19.6	19.3	19.2	20.0	19.0	19.2
Canned juice	14.6	15.9	14.6	16.2	16.2	15.6	17.4	17.4
Frozen (including juices)	9.8	11.2	11.2	12.6	12.2	11.8	11.3	12.3
Chilled citrus juices	4.7	5.3	5.2	5.7	6.2	5.8	6.4	6.4
Dried	2.7	2.6	2.4	3.0	2.6	2.5	2.0	2.2
Vegetables:								
Fresh 3/	91.0	93.0	95.0	94.1	94.2	91.8	93.3	97.2
Canned	53.0	57.7	56.9	55.1	55.7	56.2	54.1	55.0
Frozen (excluding potatoes)	9.7	10.7	10.2	9.7	10.2	10.3	10.8	11.1
Potatoes 4/	115.3	114.4	112.3	120.3	114.4	119.8	122.9	123.0
Sweetpotatoes 4/	5.2	4.6	4.9	5.0	4.9	4.5	5.0	5.0
Grains:								
Wheat flour 5/	110	112	110	113	118	114	115	112
Rice	6.7	7.0	7.6	7.7	7.2	7.6	5.8	9.2
Other:								
Coffee	10.4	10.1	9.5	9.0	9.4	6.7	7.9	7.8
Tea	.7	.8	.8	.8	.8	.9	.7	.7
Cocoa	3.1	3.4	3.0	2.6	3.0	2.7	2.7	2.7
Peanuts (shelled)	5.9	6.6	6.4	6.5	6.3	6.6	6.6	6.6
Dry edible beans	5.9	6.4	6.7	6.5	6.3	6.1	5.9	6.1
Melons	21.2	19.8	17.1	17.3	18.6	19.3	20.1	18.9
Sugar (refined)	101.8	101.5	96.6	90.2	94.7	95.7	93.1	91.3

1/ Quantity in pounds, retail weight unless otherwise shown. Data on calendar year basis except for dried fruits, fresh citrus fruits, peanuts, and rice which are on a crop-year basis. 2/ Preliminary. 3/ Commercial production for sale as fresh produce. 4/ Including fresh equivalent of processed. 5/ White, whole wheat, and semolina flour including use in bakery products.

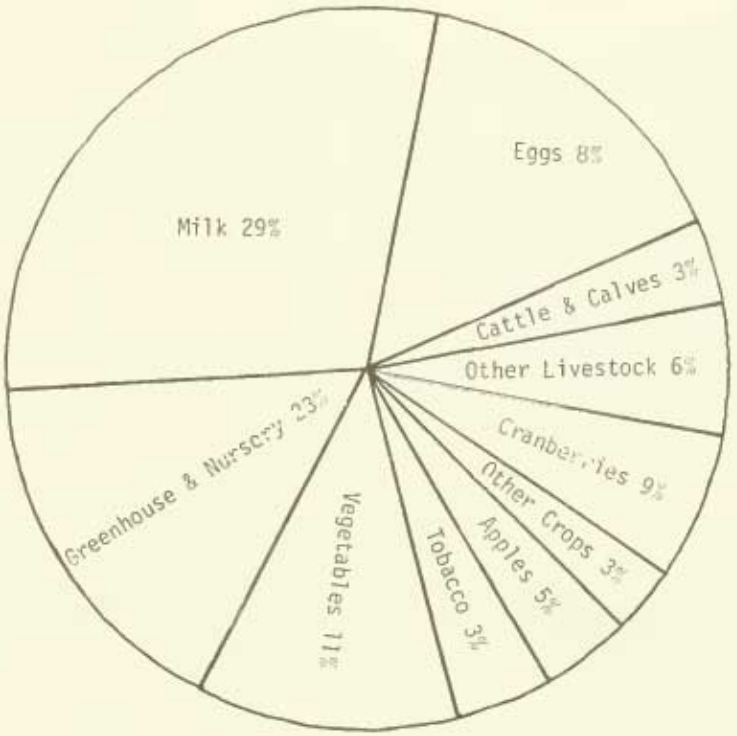
MASSACHUSETTS: ESTIMATED TOTAL POPULATION, July 1, 1950-1979 1/

Year	Total Population	Year	Total Population
1950	4,691,000	1976	5,769,000
1960	5,149,000	1977	5,768,000
1970	5,697,000	1978	5,771,000
1975	5,778,000	1979 2/	5,769,000

1/ U.S. Department of Commerce, Bureau of the Census.
2/ Preliminary.

CASH RECEIPTS FROM FARM MARKETINGS - MASSACHUSETTS - 1977-1979

COMMODITY	1977	1978	1979	1979 % of 1978	COMMODITY	1977	1978	1979	1979 % of 1978
	Million Dollars			Percent		Million Dollars			Percent
Hay	2.0	2.2	2.3	105	Cattle & Calves	7.4	10.3	8.7	84
Tobacco	10.7	8.9	8.4	94	Hogs	5.4	7.5	7.8	104
Potatoes	4.3	4.6	4.8	104	Sheep & Lambs	.1	.2	.1	50
Sweet Corn	3.8	4.0	5.2	130	Milk	65.9	67.4	73.4	109
Tomatoes	2.6	3.1	2.9	94	Eggs	20.2	19.0	20.6	108
Cabbage	.9	1.1	.9	82	Chickens Excl. Broilers	.9	1.3	1.0	77
Other Vegetables	13.8	13.6	13.6	100	Turkeys	1.5	2.0	1.8	90
Cranberries	15.5	25.5	23.3	91	Other Livestock & Poultry	3.7	4.4	4.4	100
Apples	12.3	13.1	11.8	90					
Peaches	.7	1.0	1.0	100	TOTAL LIVESTOCK	105.1	112.1	117.8	105
Other Fruits & Berries	1.2	1.5	1.5	100					
Maple Products	.4	.3	.3	100					
Forest Products	1.0	1.2	1.3	108					
Nursery and Greenhouse	48.1	52.9	58.2	110	STATE TOTAL	222.7	245.4	253.6	103
Misc. Crops	.3	.3	.3	100					
TOTAL CROPS	117.6	133.3	135.8	102					



ANNUAL REPORT

JULY 1, 1979 TO JUNE 30, 1980

MASSACHUSETTS DEPARTMENT OF FOOD AND AGRICULTURE

AGRICULTURAL PRESERVATION RESTRICTION PROGRAM
William H. King, Land Use Administrator

The Agricultural Preservation Restriction Program provides for the public purchase of agricultural restrictions, often called development rights or easements. Restrictions can either be purchased by the Department or received as a gift. Local government also has the opportunity to financially contribute to specific projects and thereby share in the purchase with the Department.

Farmers and other farmland owners voluntarily apply to the program for funding. After the application has been reviewed, and the property field inspected, it is submitted to the Agricultural Lands Preservation Committee for action. If successful, the application will become a program finalist. This is to say that the property will be appraised for both its market value and its farm value. The landowner will be offered the development rights value (market value minus farm value). If the landowner concurs, a final vote of the Committee is needed before a purchase agreement is drafted.

The program is one of four state programs now operating in the country. It provides farmland owners with the only alternative to realizing their land's development value without the land itself having to be developed for non-agricultural use. The land is restricted in perpetuity, unless released as specified by statute. A land base for Massachusetts food production is being preserved.

At the end of the 1980 fiscal year, 143 applications had been submitted to the Department of Food and Agriculture for funding consideration. The applications represented 91 cities and towns in 12 counties across the Commonwealth. A total of 13,227 acres was proposed for restriction with asking prices totaling over $27 million (see accompanying table).

Of the 19 finalists approved for appraisal and negotiation in Round I (pilot phase), 13 have received final funding approval from the Agricultural Lands Preservation Committee. Four others are under negotiation and the other two were not approved for funding. Money remaining from Round I will be added to the second $5 million provided in the 1980 Capital Outlay Budget.

Round II finalists and program participants will be selected during the next year.

AGRICULTURAL PRESERVATION RESTRICTION PROGRAM

APPLICATIONS RECEIVED
From January 1, 1979 through June 30, 1980

COUNTY	NUMBER OF APPLICATIONS	ACREAGE	NUMBER OF CITIES & TOWNS REPRESENTED
Barnstable	1	~ 65	1
Berkshire	7	1372	4
Bristol	12	1012	9
Dukes	4	342	3
Essex	14	676	9
Franklin	11	1066	5
Hampden	5	418	5
Hampshire	17	1230	6
Middlesex	14	783	12
Norfolk	11	518	6
Plymouth	14	1799	9
Worcester	33	3946	22

Total Program Statistics:
143 applications, 13,227 acres, $27 + million asking price, 91 cities and towns in 12 counties represented.
Two $5 million bond issues are available for program expenditure.
Round I Statistics:
19 applications approved for appraisal and negotiation

13 applications approved for purchase, 978 acres, 11 cities and towns in 7 counties, $2.3 million total purchase price with $176,000 contributed by cities, towns and interested private groups.
4 applications continue to be under negotiation.
2 applications were not approved for purchase.
Round II Statistics:
26 applications approved for appraisal and negotiation, 2429 acres, $6.5 million asking price, 20 cities and towns in 10 counties represented.

DIVISION OF AGRICULTURAL LAND USE
Susan Redlich, Director

The Division works in various ways to strengthen local food systems, and to improve the state's capabilities in food production and distribution. The importance of promoting food security by ensuring the viability of farming is underscored by the current dependency on imported food supplies from outside the region. Any food security gains are tied closely to the conservation of a land base.

COMMUNITY GARDENING

We have developed community gardens on state-owned lands and other public lands. There are now garden sites at 20 state locations which are used by youth, families, elderly and people on fixed income. The Division can negotiate arrangements between public land owners and garden groups to make land available. With the Division's assistance, the first community garden for Allston/Brighton was organized on MDC land; youth groups farmed several acres of land at Framingham MCI, Metropolitan State Hospital, Massasoit Community College and Bridgewater MCI.

We serve as a clearinghouse of information for the over 200 community gardens across the state and maintain lists of current garden locations and coordinators. The Division also organizes and administers the Massachusetts Seed Program, which involved 16,000 participants. The program provides vegetable seeds, free or at reduced cost to members of community garden groups. Furthering the Division's promotion of community food production, the Legislature passed the Massachusetts Fruition bill, providing funds for purchase of food-bearing trees and shrubs for planting on public land. The Division will administer this program.

PROTECTING THE AGRICULTURAL LAND BASE

The Division prepared the handbook, Cows, Corn, and Cranberries, a compendium of positive measures for towns and cities that want to protect their agricultural resources. One thousand copies were distributed to local officials. To assist policy-makers on the subject of re-disposition of surplus state property, the Division has undertaken the task of mapping and classifying a major portion of the 5,000+ acres of state-owned farmland, in order to document its importance. The Division administers permits for approximately 500 acres of state land utilized by commercial farmers.

An increase in development projects that posed negative impacts on farmland called forth Division investigations during the state's environmental review process.

ADVOCATING DIRECT MARKETING FOR SMALL PRODUCERS

The Division coordinated 6 market sites in the Boston area and expanded farmers market activities by organizing a market at Uphams Corner in Dorchester and a mobile farm stand at Mission Hill in Roxbury. We researched the state

institutional purchase orders of food that could be supplied locally; the next step will be to facilitate public food service investment in Massachusetts grown products.

ASSISTING URBAN AGRICULTURAL EFFORTS

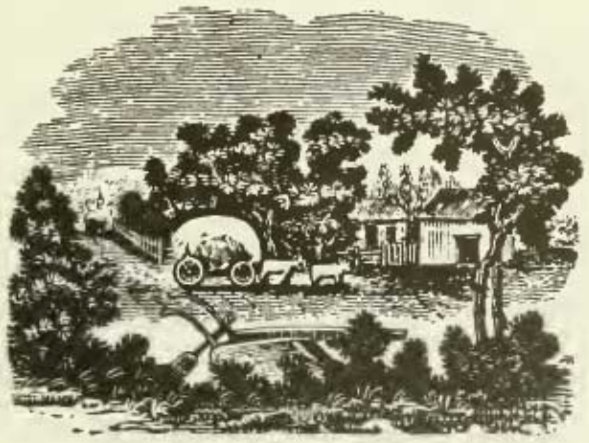
In cooperation with urban gardening organizations, the Division is taking action to establish a composting facility in Boston; the humus thus produced will be used to reclaim urban land for food production. The Division is developing plans for a working landscape at Boston State Hospital, to serve urban gardeners throughout the area; re-use of a greenhouse for community access is part of the plan. We have regularly convened the urban gardeners Task Force on Toxicity, which shares information about lead contamination of soils and has sponsored several research projects.

INCREASING EDUCATIONAL OPPORTUNITIES FOR FARMERS

Due to the great interest by the Division (along with present and potential farmers across the state) in seeing the establishment of a small farm training and demonstration center, the Legislature transferred control of the Belchertown State School Farmstead to the Department of Food and Agriculture. The Division will administer the leasing of lands and buildings for educational purposes.

FINANCIAL REPORT

The budget appropriated to accomplish the various programs of the Division was $79,000.



DIVISION OF ANIMAL HEALTH
Mabel A. Owen, Director

The control and/or eradication of important domestic animal diseases is the major goal of the Division of Animal Health and is not only crucial to human health and the success of agriculture itself, it is one of the few areas where government truly profits both producer and consumer.

The major disease control programs in the Division of Animal Health are in Tuberculosis and Brucellosis, both of which exert a considerable impact on human health.

BRUCELLOSIS

Two dairy herds were under quarantine for brucellosis in the 1980 fiscal year. One herd was removed from quarantine following the removal of reactors and subsequent clean tests. The second, a very large free-housed herd, remains under quarantine with a very low level of infection which is difficult to eradicate completely in such a large herd. The conventional test-and-slaughter procedures which cleaned up the small herd are being augmented in the large herd through additional and more definitive testing done with the aid of the Animal Plant Health Inspection Services of the United States Department of Agriculture.

A very large part of the state is now certified free of Swine Brucellosis, which also carries a human health impact. Work which will certify the entire state continues in all types of brucellosis.

TUBERCULOSIS

This disease also has important human-health connotations and is endemic all over the world. Eradication remains a continuing program with no tolerance for laxity. We require that cattle and goats imported into Massachusetts come in on permit and an approved test. We conduct a Market Cattle-Traceback (MCI) system of surveillance. We also test, at state expense, every dairy animal at least once every three years. In the 1980 fiscal year, 29,644 animals were tested. Further testing of 30 primary-test deviates revealed two reactors which were slaughtered with indemnity payment made. Herds of origin for both proved clean.

HOG CHOLERA AND RELATED DISEASES

Massachusetts continues to remain free of this disease but, since it occurs in nearby countries, active preventative procedures must be maintained. In this state the feeding of cooked garbage is allowed, with a permit required. Regular inspections of both swine and feeding procedures are made. This program, geared to the control of Hog Cholera, is important to the control of other diseases, Vesicular Exanthema and African Swine Fever in particular.

EQUINE PROGRAMS

Massachusetts requires a negative test for the presence of Equine Infectious Anemia (EIA) before a horse or pony can come into the state or be sold or shown here. 16,631 tests were reported; 14 of these, mostly detected through sale-barn testing, were found to be positive and quarantined.

Vaccination against Eastern-western Equine Encephalitis (EEE-WEE) is not mandatory, but all horse owners are annually urged to have their animals vaccinated since protection is considered close to 100 percent. This disease also attacks humans though it cannot be contracted directly from an equine.

As a largely consumer device, the licensing program for horseback riding instructors enrolled slightly over 750 in the 1980 fiscal year. Just over 200 riding schools or stables were also licensed.

The program to test pulling animals (horses, ponies, oxen) at fairs for the presence of drugs and stimulants continued and has been very well received by fair-goers and exhibitors alike.

PET SHOP LICENSING PROGRAM

The licensing of pet shops is primarily a disease-control measure for which we were amply rewarded during a recent outbreak of Velogenic Viscerotropic Newcastle Disease (VVND) in this country. Brought here by imported birds, usually parrots, this disease has the capability of wiping out the domestic poultry industry, should it find its way there. The record-keeping required by our pet shop licensing allowed almost instant traceback and test work, both of which confirmed that there had been no outbreak of the disease itself in Massachusetts.

POULTRY PROGRAMS

With the transfer of the Division of Poultry to the Division of Animal Health for the 1980 fiscal year supervisory and disease-control programs continued. 185 Shell Egg Inspection visits were made as part of a cooperative agreement made with the United States Department of Agriculture. 72 truckload inspections of frozen poultry were made under a similar agreement. Inspectors made just under 4000 store visits, to check for poultry law violations and to confirm the agreements under which twelve firms display the "Massachusetts Grown and Fresher" logo. Twenty-one fairs were inspected and more than 115,000 individual blood tests were made.

RABIES CONTROL

Under this program we initiate the quarantining of any animal which has bitten a person. 6959 cases were either quarantined or further investigated.

CONCLUSION

Our success has been aided in no small way by the extremely high degree of cooperation given to our personnel and our programs by both farmers and producers. We are grateful for this, as well as for continuing help of the United States Department of Agriculture, the Massachusetts Society for the Prevention of Cruelty to Animals, the University of Massachusetts and the Massachusetts Farm Bureau Federation.

The Division of Animal Health's budget for the fiscal year 1980 was $452,590, which included funding of the Division of Poultry Program.

DIVISION OF POULTRY AND POULTRY PRODUCTS
Lawrence E. Bliss, Supervisor

POULTRY STANDARDIZATION

During 1980 fiscal year, 7792 lots of eggs were inspected at the retail level to certify that the product met Massachusetts standards for size (weight) and quality, which must by statute be properly labeled on the carton. Violations were found in 54 lots, representing about .69 per cent of the total number inspected.

One hundred eighty-five (185) quarterly surveillance visits were made to egg handlers registered under the Egg Products Inspection Act.

Currently, there are thirteen (13) firms licensed to pack eggs under the logo: "Massachusetts Produced and Fresher"; the Poultry Division monitors these firms periodically.

POULTRY SERVICES

Seventy-two (72) truckloads of frozen poultry, under the U.S.D.A. School Lunch Program, were certified, as to quality, at the point of delivery.

Ninety-two (92) state institutional inspections were made with 739 cases of eggs being examined; 28 cases, or about 3.8 per cent were rejected as not meeting the bid specifications of the Commonwealth.

Thirty-one (31) days were spent by one inspector, under the U.S.D.A. Fee Grading Program in egg packing plants.

POULTRY DISEASES

Under the National Poultry Improvement Plan (NPIP), 115,567 birds, up 15 per cent from the previous year, were blood tested for evidence of Pullorum-Typhoid disease and found negative for the seventh year; 131,010 blood samples were also taken for evidence of Mycoplasma Gallisepticum and found negative. Thus, our Massachusetts poultry breeders were able to export 1,162,325 baby chicks and 912,170 hatching eggs to foreign buyers.

Division inspectors were on hand at 23 fairs and poultry shows to inspect birds for clinical symptoms of illness and/or disease, and to determine compliance of the exhibitors with the Pullorum-Typhoid testing program.

The Department filed seven bills through the Secretary of State's office for the calendar year 1980. Six of them received favorable reports from the Committee on Natural Resources and Agriculture, and the seventh bill received a favorable report from the Committee on Taxation. The first six expired in the House Ways and Means Committee and the seventh, in the Senate Ways and Means Committee.

We did have success, however, in other bills affecting agriculture for the fiscal year 1980.

Chapter 572. An Act Relative To The Operation Of Farm Vehicles. (Approved August 28, 1979)

This Act removed the fifty mile restriction on farm vehicles. Farm vehicles may now travel anywhere within the Commonwealth, or in bordering states which have a reciprocal agreement with the Registry of Motor Vehicles for the operation of similarly registered vehicles.

Chapter 693. An Act Exempting Certain Agricultural Or Aquacultural Projects From The Wetlands Protection Act. (Approved November 7, 1979)

This Act exempts aquaculture as well as agriculture from the Wetlands Protection Act.

Chapter 704. An Act Regulating The Generation, Transportation, Storage, Treatment And Disposal Of Hazardous Waste. (Approved November 9, 1979)

This Act set up a Division of Hazardous Waste in the Department of Environmental Quality Engineering and established a Hazardous Waste Advisory Committee. It has no immediate effect on agriculture.

Chapter 86. An Act Relative To The Development And Encouragement Of The Breeding Of Standardbred Horses. (Approved April 10, 1980)

This Act provides that no colt or filly shall be eligible to race in the Standardbred Program unless registered with the Department and the Massachusetts Standardbred Breeders and Owners Association.

Chapter 102. An Act Relative To The Control And Eradication Of Brucellosis In Bovine Animals. (Approved April 23, 1980)

This Act changed the effective date of Section 2 of Chapter 485 of the acts of 1978 from July 1 to January 1, 1981.

Chapter 378. An Act Further Regulating Certain Agricultural Land Use. (Approved July 3, 1980)

This Act broadened the scope of the Land Use Program in the Department. Now any person may make application for a permit to use vacant public land for propagation and cultivation of fruitbearing trees and shrubs, and nut trees.

Chapter 397. An Act Providing That Employees Of The County Cooperative Extension Service Of Suffolk County May Participate In the Commonwealth's Group Insurance Program. (Approved July 7, 1980)

The title of this Act is self-explanatory.

Chapter 428. An Act Providing For An Institutional License For Certain Veterinarian Schools. (Approved July 9, 1980)

This Act provides that the Tufts School of Veterinary Medicine may make application for an institutional licenses for veterinarians who are not otherwise licensed,so that said veterinarians may practice veterinary medicine if such practice is conducted in conjunction with their full-time employment by the school.

Chapter 475. An Act Authorizing The Long Term Leasing Of Certain Land And Buildings At Belchertown State School From The Department of Mental Health To The Department Of Food And Agriculture, For The Purpose Of Promoting The Establishment Of A Small Farm Demonstration And Training Center. (Approved July 11, 1980)

This Act provides that the Department of Mental Health shall lease to the Department of Food and Agriculture, for a period of ten years with an option to renew said lease for an additional ten years,for purposes set forth in said title.

DAIRY FARM INSPECTION

Of the 7684 initial yearly inspections of dairy farms made by division personnel, 22 per cent or 1685 farms failed to comply with the Commonwealth of Massachusetts regulations, necessitating repeat inspections. Approximately 24 per cent of the reinspections still failed to comply, resulting in warning letters, hearings and fifteen exclusions. An additional 900 dairy farms in Maine were inspected by personnel of the Maine Dept. of Agriculture. These inspection reports may now be accepted by the Commonwealth under stipulated conditions as per Chapter 940 of the Acts of 1977.

MILK PLANT INSPECTION

Ninety-nine "first inspections" were made of milk plants, with 23 per cent not approvable, resulting in numerous reinspections before acceptable compliance was achieved.

MASTITIS CONTROL

A total of 138,706 milk samples were collected from 668 herds for delivery to the diagnostic laboratory at the University of Massachusetts, where they were analyzed. This voluntary program aids dairy farmers in the detection, treatments, and control of mastitis which results in higher production for the dairyman and in better quality for the consumer.

USDA GRADING & USPH MILK RATINGS

Division personnel licensed by the U.S. Dept. of Agriculture spent 78 days inspecting and sampling dairy products, resulting in income to the Commonwealth of $9,660.

Division personnel certified by the U.S. Public Health Service as Milk Sanitation Rating Officers fulfilled all requests by industry for Interstate Milk Shippers' raw milk supply ratings.

FINANCIAL REPORT

The appropriated budget for the fiscal year was $236,200.

DIVISION OF FAIRS
Stephen F. Quinn, Director

The fairs as a whole, enjoyed a rather large increase in paid attendance, due mainly to the gasoline crisis of the summer of 1979. It was convenient for many residents to take in the local fairs rather than traveling great distances for entertainment. However, there was a sharp decline in the number of exhibits and exhibitors. Because there wasn't any considerable increase in prizes, they reduced the number of their entries and shows due to the high cost of traveling.

2,417,401 people paid admissions to one of the various agricultural fairs conducted within the State. This figure is up 296,209 from last year. $262,421 was expended for prizes by the State and $115,358 was added by the fairs for the promotion of agriculture. 69,205 exhibits were displayed, 32,458 of which were youth, these figures are down 10,605 and 2,550 respectively from 1978.

The Massachusetts Building was again very successful with the theme "Massachusetts Grown and Fresher", incorporated into every commodity group presentation. This year the Marine Fisheries joined with us in the building and an excellent display of utilizing under developed species of fish was conducted.

The Division hired 12 fair inspectors, on a part time basis, to aid the Director in overseeing the programs. Their value is shown in the reports received on each fair, assuring that the State is in fact getting the most out of prizes awarded and rehabilitation monies allotted.

REHABILITATION PROGRAM

The rehabilitation committee met and approved allotment of $153,658 to 51 fairs, to help defray the cost of improvements of their facilities in three categories: a) public health; b) animal health; c) displays. The committee also reviewed the guidelines set for the distribution of the monies and made proper changes so as to protect the State from any chance of misused funds.

Many of the fairs where monies were allotted were on the brink of disaster. This account is a mainstay, and without it, many fairs would have to cease their operation.

FINANCIAL REPORT--DIVISION OF FAIRS

The total appropriated budget for the fiscal year was $615,600. Of this total, $340,600 were appropriated for the fair prize awards, fair inspections, promotional programs and administrative costs; $75,000 were appropriated for the Fair Rehabilitation Program, and $200,000 for the Thoroughbred and Standardbred Programs.

THOROUGHBRED HORSE PROGRAM
Peter Bundy, Supervisor

The Thoroughbred Breeding Program was enacted into law in 1969. The purpose of this program is to encourage agriculture by the breeding of Thoroughbred horses in the Commonwealth, and to maintain open spaces.

Incentive award monies are paid to the breeders of Massachusetts bred horses that finish first, second or third in any pari-mutuel races at licensed Thoroughbred race tracks in Massachusetts.

The breeders' awards amount to twenty per cent of the purse won by the horse in the race. An additional award of five per cent is paid to the owner of the stallion which sired said horse, provided the stallion stood the entire breeding season in Massachusetts, and is registered with the Massachusetts Department of Food and Agriculture.

During the fiscal year of 1980, 1,087 Massachusetts bred Thoroughbreds went to post at Suffolk Downs and four agricultural fairs. Of the number of Massachusetts breds sent postward, these home-bred horses accounted for 151 wins, 149 seconds and 177 thirds, the best percentage of Massachusetts breds ever to be competitive in open racing.

This fact proves that the quality of Thoroughbred horses raised in our State is definitely improving.

Breeder and stallion awards from the Massachusetts Thoroughbred Breeding Program amounted to $110,947.87 for this period.

The revenue derived by the Commonwealth is five per cent of the money wagered on Massachusetts breds, which is obviously a considerable sum.

Over 200 Thoroughbred mares were bred by Massachusetts stallions during this period,and the stallion roster remained approximately the same with some older stallions being retired and new ones being added to the registry.

STANDARDBRED PROGRAM
Barbara E. Dolloff, Supervisor

The Standardbred Horse Program encourages and promotes the breeding, propagation, ownership, raising, racing and marketing of Standardbred horses bred in the Commonwealth of Massachusetts. Thus it encourages the keeping of open land to promote agriculture and agricultural related industries within the Commonwealth.

There are now 49 stallions registered with the Department of Food and Agriculture, standing in service at 43 farms. Last year's breeding produced 125 foals. These foals will be eligible to be registered as "Mass Bred", and participate in the 1982 Sire Stakes Program.

There were 59 Sire Stake events, at 8 fairs, for 48 two- and three-year-old horses this year. Though the Standardbred Program is in need of an increase in allotment monies, the program was successful. The quality of breeding has improved, as reflected in the increased market price for a Massachusetts Bred Standardbred horse. In the last year, three such horses were sold for over $30,000 each, including one at $96,000. It is known that these monies will be invested back into the Massachusetts breeding program.

Governor Edward King called for a joint meeting with Greyhound, Thoroughbred and Standardbred breeding enthusiasts,to establish a committee to investigate the feasibility of promoting "Mass. Bred" dogs and horses. Though many reports were compiled by committee members interested in a viable program for their particular breed, no new proposal for legislation could be submitted.

PUBLIC INFORMATION

Telling the non-farming public about agriculture in our state becomes more important as the numbers of farms and farmers decrease in proportion to city and suburban folks.

The availability of farm land is essential to maintaining a strong agriculture in an ever urbanizing state, and so public information efforts in this area are most important.

Press releases and public events announcing farms selected to participate in the state's Agricultural Preservation Restriction Program help call attention to the need for protecting farmland in our state. An article is also written on each farm chosen to take part in this unique farmland preservation program.

News releases are prepared on other farm issues and Departmental activities such as land use, community gardens, animal health, pesticide and plant pest control programs, fairs and other farm events across the state.

The marketing and promotion of Massachusetts farm products are of course necessary to a healthy agricultural economy, and so the Department's public information program concentrates in this area.

In addition to press releases covering the production of major local crops, the Division prepared more leaflets in the series covering the nutritive value, selection and preparation of Massachusetts grown vegetables and fruits.

News media requesting information were assisted directly or referred to appropriate personnel in the Department or other public or private agencies.

The Division also compiled and publicized the listing of farmers market locations across the state, and cooperated with the Massachusetts Federation of Farmers and Gardeners Markets and the Cooperative Extension Service in promoting various direct marketing outlets for local farmers.

Public service announcements produced by Channel 5 continued to be used extensively during the summer months by TV stations across the State. Department personnel also continued to take part in various programs such as WBZ Radio's "Countryside" aired Saturday and Sunday mornings, daily market reports aired on WHDH, WEEI, and occasional food demonstration features on the Channel 5's "Good Day" and the Channel 4 "Sharon King" show.

The second annual awards for news reporting on agricultural topics were sponsored by the Department in cooperation with the Northeast Communications Officers of State Departments of Agriculture. State winners were David C. Denison, Boston Phoenix, 1st prize; Joyce Miller, Concord Patriot, 2nd prize; and Marya Dantzer-Rosenthal, Minute-Man Publications, Lexington, 3rd prize.

The Division helped in the preparation of the booklet "Northeast, USA," a food and agriculture policy endorsed by state Agriculture Commissioners and Governors and the first such regional document of its kind.

The third annual "Massachusetts Agriculture Week" took place in August, and the Division coordinated plans with the Cooperative Extension Service, other agriculture agencies and farm leaders across the state.

PRODUCT PROMOTION

Major food chain stores recognize the need for fresh Massachusetts grown vegetables from local farmers for a successful produce department during the local production period.

They realize that competition from local farm stands and farmers markets is at its heaviest during this time and that to entice the consumer to shop at their stores, they must feature local grown vegetables as an attraction. Local food chain stores have been running full colored page advertisements in Boston newspapers using the "Massachusetts Grown and Fresher!" logo. Television commercials also show the logo with a local farmer in the promotion. We feel this is quite an accomplishment, and we are proud of the fact that a local supermarket chain is helping promote our state's agriculture in such a visible way.

The consumers are now aware that they can also buy fresh Massachusetts grown vegetables at local food markets, as well as from farm stands and farmers markets. The survival of local commercial farmers depends on volume production and the large food chain is an excellent outlet. A commercial farmer who does business with a food chain knows before he puts the seed in the ground that he has a definite market for his crop. It has become a team effort, each one doing what he knows best, the farmer growing and the food chain store merchandising. The Division of Markets assists them and encourages them to continue this good relationship. As the future of the vegetable grower in the State becomes more promising, more large food chain stores show their interest in buying "Massachusetts Grown and Fresher!" vegetables.

PROMOTIONAL ACTIVITIES

The Division offers promotional material in small amounts free of charge to those interested in promoting Massachusetts agriculture.

The Division conducted a "Taste of Massachusetts" booth at the Food and Fun Festival at the Commonwealth Pier promoting various aspects of Massachusetts agricultural products.

The Division designed and constructed the Department's exhibit at the New England Spring Flower and Garden Show. The exhibit was presented the "James Underwood Crockett Award" for "Display Best Communicating Horticultural Knowledge" from the New England Nurserymens Association Inc.

The Division also exhibits at fairs and public buildings. It also coordinates The Massachusetts Chicken Contest and New Varieties Day for the Massachusetts Flower Growers Association. The Division conducts farm tours for the press, food industry, and visiting dignitaries. The Division is the primary liason with the agricultural sector of the State for the Department.

The Division provides the general public and the farmers of the Commonwealth with informative lists: Pick-Your-Own Vegetables, Pick-Your-Own Strawberries, Pick-Your-Own Apples, Pick-Your-Own Blueberries, Where-You-Can-Cut-Your-Own Fresh Christmas Tree, Where To Buy Fresh Turkeys, and locations of Farmers Markets. A directory of Massachusetts growers, sellers, and buyers of fruits and vegetables is published by the Division to service the need of that industry.

MARKET NEWS

The Federal-State Market News Service publishes the daily "Boston Fresh Fruit and Vegetable Report", which has a circulation of 900 throughout the U.S., Canada and other countries and the "Boston Ornamental Crop Report", circulation of 300 in the U.S., Canada, Central and South America.

Market News publications under State auspices include the daily "Springfield Wholesale Market Report", the weekly "Special Apple Market Report" outlining storage holdings and market movement, and the weekly "Food Buyers Guide", listing retail price ranges of 150 fruit, vegetable, meat, poultry and fish items.

FOREIGN TRADE SECTION

A substantial increase in the number of Massachusetts agribusiness firms participating in the export programs of the Division of Markets has occurred in this fiscal year. There are now 100 firms utilizing the services and resources of the Foreign Trade Section. This is an increase of 20 firms who are either "new-to-export" or are experienced exporters utilizing our services for the first time.

A major source of the additional firms has stemmed from the Trade Section's strong support and active participation in the International Seafood Exposition held in Newport, Rhode Island on May 19-20, 1980. A total of 41 domestic fishing industry firms displayed their products to 70 foreign buyers from 15 countries of Europe, South America, Africa and the Far East.

According to the National Marine Fisheries Service sources, this international trade show of fish and fish products was perhaps the first of its kind anywhere and was judged as excellent by both exhibitors and buyers.

DIRECT MARKETING ACTIVITIES

Farmers markets in the Commonwealth are becoming second nature to the consumers and to the farmers across the state. Cities and towns are becoming more interested in them and seek guidance from the Department in their establishment. The Cooperative Extension Service also provides assistance and advice to farmers markets, which are now found at 48 locations across the state during the summer growing season. Funds have been provided to Massachusetts Federation Farmers and Gardeners Markets to assist them in promoting these markets. The Division encourages farmers to sell at these outlets and also assists in publicity and public information concerning the farmers markets.

Through the establishment of Farmers Consumer Direct Marketing Act of 1976, the New England Food Cooperative Organization (NEFCO) was able to obtain nearly $1000 for construction materials and purchase a cottage industry scale apple drier for local fruit drying. These funds were also used to purchase a used truck which is utilized to obtain produce from eastern Massachusetts growers unable to deliver to the warehouse.

In another novel method of marketing, NEFCO has worked with a number of growers who at peak harvest time find themselves short of farm labor. NEFCO arranged a work schedule with the grower for coop members to work on the farm, and NEFCO is compensated for 10 per cent of whatever crops are harvested. Direct Marketing Act funding was truly instrumental in getting a NEFCO local produce program off the ground.

The Roadside Marketing Specialist assists various direct marketing operations across the state. The specialist is in direct contact with Massachusetts growers, working with them to establish new roadside markets, organize existing markets toward more efficient operations or help solve specific marketing problems. He writes a bimonthly newsletter informing growers of marketing trends and retailing techniques. His statewide travels also allow him to work with farmers market organizations and individual growers at these markets. The advice and recommendations given to growers serve to upgrade the appearance, cleanliness and image of roadside farm markets in Massachusetts.

The promotional activities of the marketing specialist include the distribution of "Massachusetts Grown and Fresher" promotional materials and work with the Massachusetts Vegetable Growers Associations' "Vegetable of the Week" promotion program. As chairman of the Massachusetts Federation of Farmers and Gardeners Markets' promotion and exhibit committee, he has promoted farmers markets through informative exhibits and live farmers markets at the Massachusetts Farm Tour day in August, Eastern States Exhibition in West Springfield and smaller fairs and functions throughout the year. His recent survey of roadside stands in Massachusetts will provide the necessary information for a Roadside Marketing Directory to be released in the coming fiscal year.

MILK FLAVOR PROGRAM

This program provides an organoleptic evaluation service for the milk industry with the objective of preventing consumer dissatisfaction with the flavor quality of milk and milk products purchased by them.

Milk plant personnel, quality control field men and Future Farmers of America Chapter students are instructed on the types of off-flavors and are trained to recognize the flavor defects and to institute the proper corrective action with milk producer samples, blended tank shipments, and finished products.

The samples evaluated range from 5 to 250 per examination with the average monthly total including 50 finished products, 90 blended tank shipments and 755 farm samples.

INSPECTION & REGULATORY SERVICES

The Federal-State Inspection Service issues U.S.D.A. inspection certificates on shipments of fruit and vegetables at shipping points and local processing plants. These certificates which certify grade, quality, condition and size of the products are done on a prescribed fee basis and are payed by the applicant or shipper. Inspections are also made at wholesale markets and retail stores in order to insure the correct labeling and grading of apples, potatoes, seed, feed, pet food, and fertilizers. Inspectors also check to enforce the "native law", which requires the state of origin to be used whenever the word "native" is displayed.

The program provides for inspection and regulation of controlled atmosphere apple storage rooms, cider mills and roadside stands.

The annual registration of seed, feed, and fertilizer with the collections of fees and penalties and the administration of the related laws, including cooperative work with the U.S.D.A. and the F.D.A., is part of this overall program.

FINANCIAL REPORT

The budget appropriated for the Division was $395,100, of which $100,000 were directed to commodity groups for the promotion of their products. Funds are allotted according to the guidelines with the approval of the promotional Advisory Committee and the Commissioner of Food and Agriculture. Copies of these guidelines are available to interested parties.

Revenue generated by inspection and registration fees was $105,973.

Calendar Year *

SEED INSPECTION PROGRAM/OFFICIAL SAMPLES TESTED

	1977	1978	1979
Agriculture	72	62	37
Mixtures (lawn)	97	86	103
Vegetables	509	477	528
Flowers	250	206	132
Flower Mixture	5	4	3
	934	835	803

Stop sale orders 9 covering 30 lots of seed - poor germination, noxious weeds, unfit for seeding.

FRUIT & VEGETABLE INSPECTION REVENUE

	1977	1978	1979
Apples	$9,812.07	$10,061.74	$16,090.07
Cranberries	245.32	--------	577.00
Onions	3,374.26	2,979.96	1,741.96
Potatoes	8,862.26	3,251.25	4,411.57
Total	$22,293.91	$16,292.95	$22,820.60

FEED, FERTILIZER AND LIME REGISTRATION

	1977	1978	1979
Feed/a	1,929	2,008	2,014
Fertilizer/b	658	697	799
Fertilizer/c	15	14	14
Lime/d	25	29	24

FEED, FERTILIZER AND LIME REVENUE

	1977	1978	1979
Feed/a	$48,225.00	$51,900.00	$50,350.00
Fertilizer/b	16,450.00	18,200.00	20,125.00
Fertilizer/c	1,875.00	1,750.00	1,750.00
Lime/d	625.00	725.00	600.00
Fertilizer/e	8,344.77	8,849.90	10,826.73
Fertilizer/f	3,029.98	2,197.10	1,348.81
	$78,549.00	$83,422.00	$85,000.54

/a Brands
/b Specialty brands
/c Commercial plants
/d Brands
/e Tonnage
/f Penalties

*Statistics and revenue are collected on a calendar year

MILK CONTROL COMMISSION
John B. Kelley, Director

The Division of Milk Control completed one of the most challenging years of its existence since 1934 in carrying out its responsibility to the consumer of milk, the milk dealers at wholesale and retail, and to the farmer-producers of the Commonwealth.

In adjudicatory and administrative procedures, and in litigation before the Superior Court, the Commission's decisions were sustained and enforced as to the ongoing battle against predatory pricing and to sustain the priority of Massachusetts produced milk in certain situations permitted by law.

Reorganization in bankruptcy of the third largest dairy in the state tested the resources of the State, the Commission staff, and also strained to the utmost the farmers of the state. With the cooperation and assignment of the United States Trustee and Court, efforts were successful in keeping this large employer and supplier on an operating and recuperating basis.

Partly through its efforts, the Commission and staff are able to announce and confirm that milk sells to the 6,000,000 Massachusetts consumers at about the lowest price of any state in the country!

Progress was significant in the campaign involving the Director and field staff in reorganization and realignment of the butterfat testing and the holding and care of samples for payment purposes. The accuracy of their work determines the income of each and every dairy farmer and occupies much of the five field inspectors' schedule.

Successful seminars held at various locations in the State kicked off a program which will be repeated annually so that bulk tank truck drivers are made aware and monitored as to the proper execution of this function.

The Milk Control Commission provides a monthly supermarket milk price survey to the International Association of Milk Control Agencies.

Milk Control is the agency of State government which licenses all retail outlets of milk and last year more than 3,500 stores were licensed - ranging from the large supermarket chains to the so-called "mom and pop" stores.

All in all, it was a year of great progress and efforts are going forward to sponsor and lobby for legislation drafted by Commission Counsel, Peter F. Hines, Esq., to help all dairy farmers by inauguration of a Producer Security Fund to protect dairy farmers against loss when unforseen bankruptcies by dealers occur.

The Milk Control Commission is a self-sustaining agency whose income more than covers all payroll and ancillary expenses of the Division. Income derived from the milk industry for the fiscal year amounted to $246,270 and expenses for the period amounted to $214,465.

PESTICIDE PROGRAM

Lewis F. Wells, Jr., Program Supervisor

The Department of Food and Agriculture administers the Pesticide Program which controls the use and application of pesticides in Massachusetts. The registration of pesticides and the issuance of experimental permits is the province of a subcommittee of the Pesticide Board in accordance with Chapter 132B of the General Laws.

The Pesticide Board is administratively in the Department and by statute, the Commissioner of Food and Agriculture acts as chairman. The Board advises the Department as to policy in the implementation of the Massachusetts Pesticide Control Act, must approve of regulations promulgated by the Department and the acts as an appeal body to actions of the Department as it carries out the intent of the statute.

In fiscal year 1980, the Department continued to phase in the comprehensive pesticide regulatory program set forth in the statute and in regulations made during the previous year.

A key action was the negotiation of an enforcement grant with EPA which provides for conducting a program for enforcement of both the state and federal laws. Funds from this grant will provide for chemical analysis of samples taken during inspections and investigations, for the support expenses of two state inspectors, and for legal services from the Office of the Attorney General. These grant funds total $100,797.

During the fiscal year 1980, the following actions were taken by the Pesticide Program:

1. 2751 persons were certified to apply or supervise the application of restricted pesticides.
2. 408 persons were licensed to apply general use pesticides to land of another or to apply restricted pesticides under the direct supervision of certified persons.
3. 95 persons were licensed as dealers in restricted pesticides.
4. 52 investigations of pesticide incidents were carried out.

Consultation relative to proper use of pesticides was given to other state agencies, municipal agencies, and the general public as requested. It is estimated that this aspect of the program takes 20 to 25 per cent of the time of the staff.

The Pesticide Program's budget for the fiscal year 1980 was $86,745.

PLANT PEST CONTROL DIVISION
Peter C. Kuzmiski, Director

Preventing the introduction and spread of damaging agricultural plant pests and diseases into the Commonwealth is the primary goal of the Plant Pest Control Division.

This responsibility is directed towards preventing serious losses to property owners and avoiding nuisances caused by the presence and activities of these pests. The program also authorizes the unrestricted movement of plants and plant products throughout the country, so that producers can participate in fair trade competition. In addition to contributing to the economic benefit of the plant industry, the Plant Pest Control Division helps to assure a higher quality product for the consumer.

NURSERY INSPECTION

The detection of plant pests by the inspection of nurseries is necessary and beneficial for several reasons. Many pests have limits to their distribution, thus the prevention of spread on infested or infected plants helps in the containment of the pest. During nursery inspection pests that are capable of causing serious damage may be noted,so controls are suggested and applied before damage occurs.

Early detection of a pest problem will aid in preventing its spread within the nursery and will permit controls to be applied before the pest reaches serious proportions. This is very important to a nurseryman who ships his plants interstate and runs the expensive risk of having his plants rejected because of the presence of damaging pests. Nursery inspection also guarantees the consumer of purchasing healthy and pest free plants. This year there were 450 nurseries and 85 greenhouses inspected.

Agents' licenses were issued to 350 applicants. An agent is a person or establishment who buys and sells or takes orders for nursery stock, but does not grow the plants in ground.

The common pests found in nurseries this year were: aphids, lace bugs, mealy bugs, scales, and leaf chewers. Japanese Beetle populations in the nurseries were less than in the previous year. The White Fly was the predominant pest found in greenhouses.

The nursery inspection force consisted of six temporary and three permanent inspectors. The work begins on July 1 by law, and usually ends in the first week of September.

PHYTOSANITARY CERTIFICATES

Plant health certificates are issued for plants and seeds destined to other states and to foreign countries. There were 410 certificates issued for the exportation of plants and 408 certificates for the shipping of plant seed to foreign countries.

POSTENTRY QUARANTINE

Certain plants from foreign countries must be grown here for two growing seasons before they can be released from quarantine. Inspections are made during the growing season here, and releases are made after the final inspection. Plants from foreign countries were growing here at 37 sites this year. Some of these plants included, Rosa, Aesculus, Acer, Sorbus, Dianthus, Hibiscus, Hydrangea, Ulmus, and Cedrus.

WHITE PINE BLISTER RUST QUARANTINE

In order to prevent the spread of the fungus that causes the White Pine Blister Rust disease, it is necessary to restrict the planting of currants and gooseberries in certain localities of the Commonwealth.

These plants act as an alternate host of the disease. The fungus must live and grow at least a year on the currant or gooseberry before it can spread and infect the White Pine. There are 144 towns and cities where the planting of currants and gooseberries is prohibited. Control-area permits are issued to nurseries shipping these plants into non-prohibited planting sites. This year 91 control-area permits were issued.

GYPSY MOTH

The Gypsy Moth was on the increase again this year. This pest did not pose too much of a problem to the nurseries due to a spray schedule maintained by the nurserymen. However, there was an estimated defoliation rate of over 230,000 acres of woodland defoliated from 30 to 100 per cent this year. No control was attempted by state authorities. Some cities and towns did apply sprays, but they were not too successful in obtaining meaningful control.

Property owners were advised to undertake control measures on their own lands. Federal authorities treated two camp sites by applying a pesticide with ground equipment this year. These camp sites were areas where recreational vehicles frequented, and some were destined to states that did not yet have the Gypsy Moth. The chemical pesticide, Sevin, was used for the spray material. Forecasts for 1980 show at least a fifty per cent increase in this pest.

SURVEYS

Surveys were conducted this year for the presence of the Cereal Leaf Beetle, European Chafer, Red Steele disease of strawberry and noxious weeds.

The majority of Cereal Leaf Beetle larvae and adults were found to be parasitized by one of our introduced parasitic wasps, and it was concluded that further control of this pest by man was not necessary now.

The survey for European Chafer showed that this pest has not spread out of the known infested area of Eastern Massachusetts. Red Steele disease was not found in any of our strawberry plant nurseries this year. The noxious weed survey was initially done here this year as a federal cooperative project. No exotic noxious weeds were discovered, however important data useful for future surveys has been recorded, and guidelines are now available to assist in making more efficient surveys of this nature.

APIARY INSPECTION

The report of the apiary inspection work is included in this report.

COLLABORATION WITH U.S. DEPARTMENT OF AGRICULTURE

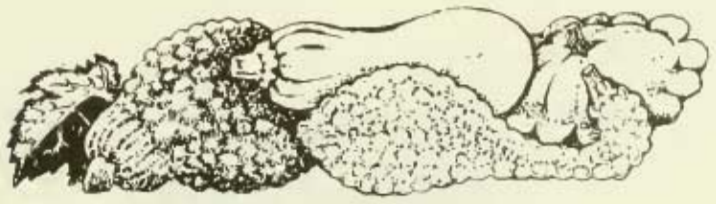
Collaboration with the Federal agency continued in the programs of Gypsy and Brown-Tail Moth quarantine enforcement, Japanese Beetle control, Black Stem Rust control, Pest Detection Survey, Port Inspection, Noxious Weed Survey and Plant Export Certification.

Two of our permanent inspectors are assigned to these collaborator programs. Field offices are located in Hadley and Waltham.

PUBLIC INFORMATION ACTIVITIES

Information relating to horticultural and vegetable plant culture, pest control, use of pesticides and many other related subjects is made available to the public via the telephone, correspondence, news media, and personal visits. Insect and plant identification is a common inquiry. The Division maintains a regular monthly radio program featuring a question and answer call show.

The fiscal budget of $92,000 allowed the maintenance of 5 permanent and 13 temporary employees this year.



APIARY INSPECTION

Thomas S. Leonard, Chief Inspector

As only two inspectors worked actively through the summer of 1979 and the inspection program started through June with four inspectors, the available statistics do not accurately reflect beekeeping in the state.

It is a fact that there are over twice as many beekeepers and hives as previously reported. It is also becoming apparent, through spot checks and reports from individuals and county organizations, that the major bee disease, American Foulbrood, is approaching 10 per cent. Most states and professional beekeepers feel that a 1 per cent A.F.B. rate is manageable and acceptable.

The honey flow in 1979 was very good, and most bees went into the winter in a strong condition. The strong hives coupled with the mild winter contributed to excessive swarming this spring. Five towns contacted the Division with complaints, with two taking the beekeeper to court. There is no state policy on keeping bees, although the ability to work with both the beekeeper and the town officials proved beneficial in resolving these complaints.

The value of honey bees as pollinators has long been recognized although not properly acknowledged. Fruit set can be more than tripled with one hive per acre on cranberry bogs and apple orchards. About 20,000 hives were rented for fruit pollination in Massachusetts, at an average of $23 per hive.

Legislation providing for the registering of bee hives and the certification of bee equipment and bees for sale within the State was again defeated this year.

The two major obstacles to the apiary program's development and growth with the expanding Massachusetts beekeeping are:

1. The recruitment of qualified inspectors.

2. The lack of understanding and cooperation of the Legislature in regard to a beekeeper's problems and needs.

MASSACHUSETTS DEPARTMENT OF FOOD AND AGRICULTURE - APIARY INSPECTION

ANNUAL STATISTICAL REPORT

SEASON 1980

COUNTY	NO. COLONY EXAMINED		NO. COLONY OWNED		NO. COLONY A. F. B.		NO. COLONY E. F. B.		NO. COLONY TREATED		NO. COLONY DESTROYED	
	1979	1980	1979	1980	1979	1980	1979	1980	1979	1980	1979	1980
BARNSTABLE	0	73	-	73	-	3	-	0	-	0	-	0
BERKSHIRE	20	0	20	-	0	-	0	-	0	-	0	-
BRISTOL	96	159	96	180	4	4	1	7	0	0	0	0
ESSEX	150	17	211	17	0	2	0	0	0	0	0	0
FRANKLIN	47	46	66	60	0	0	0	0	0	0	0	0
HAMPDEN	0	476	-	500	-	0	-	0	-	0	-	0
HAMPSHIRE	100	374	177	374	1	23	0	1	0	0	0	0
MIDDLESEX	2158	3182	3628	3182	35	42	81	64	70	30	0	0
NORFOLK	530	462	530	462	15	40	7	8	15	4	0	0
PLYMOUTH	486	469	589	589	34	50	14	39	3	41	0	1
WORCESTER	306	1600	330	1580	0	16	1	2	0	10	0	1
SUFFOLK	19	88	19	88	0	1	0	1	0	0	0	0
TOTALS	3912	6946	5666	7027	89	181	104	122	88	85	0	2

A.F.B. 1979 - 2.2% A. F. B. 1980 - 2.6% E. F. B. 1979 - 2.6% E. F. B. 1980 - 1.7%

ESTIMATE NO. COLONIES IN MASSACHUSETTS 15,500 (- means no data reported)

The Department of Food and Agriculture is represented on the State Reclamation Board by John J. McColgan and the Department of Environmental Quality Engineering by James L. Dallas. The third member position at the present time is vacant due to the retirement of Albert H. Zabriskie of the Department of Environmental Management. With the advent of Charles Cannon's retirement Elizabeth M. Costello was appointed secretary of the Reclamation Board.

This year the Board employed Mark S. Buffone as Entomologist. It has been several years since the Board has had the services of a staff member trained in entomology, and this has helped increase our program of work and services to the public this year.

As in previous years,the State Reclamation Board's main activities focused on the mosquito problems of the Commonwealth. This year the Board provided the district commissioners with administrative resources, technical assistance and recommendations relative to mosquito control practices. The Board has under its aegis ten regional districts which provide 188 municipalities of the Commonwealth with expert and trained personnel, special equipment, material, and a comprehensive plan to efficiently and effectively reduce mosquito populations.

The Board initiated a program of review and approval of the procedures of the remaining mosquito control programs of municipalities not in a district.

This year the Town of Bedford voted to re-enter the East Middlesex County Mosquito Control Project after voting itself out for the last two years. The Town of Lunenburg became a new member of the Central Massachusetts Mosquito Control Project. The City of Leominster requested to become a member of Central Massachusetts Mosquito Control District; the request was untimely, and action will be taken to include Leominster next year. Interest from citizens in the southwest area of Worcester County prompted filing of legislation to form a new mosquito control district. The proposed legislation was passed by the House but failed in the Senate. Legislation was also filed to have the South Shore Mosquito Control Project become a district organized under the provisions of Chapter 252.

Regarding the financing of the mosquito projects; all mosquito control operations, totaling approximately $2,000,000 are financed locally. The eight organized mosquito districts funding is based on a formula involving land area and valuation. The formula is spelled out in the special legislative act under which each district is organized. East Middlesex and South Shore Mosquito Control Projects are voluntary trusts; they are funded by the cities and towns who have elected to join them through town meetings or city council vote. During the year, the mosquito control budgets that were requested for the 1981 fiscal year were cut in committee, and in some cases, significantly. The Senate Ways and Means Committee conducted a survey of all communities in each district to ensure that they were agreeable to the assessment. After this survey, the Committee reinstated these monies to full funding for each mosquito control project.

This year the Biting Fly Project continued to be a valuable service. It is currently supported by a matching funds agreement between the University of Massachusetts Extension Service and the ten regional mosquito control projects via the State Reclamation Board. Jere Downing (Biting Fly Specialist) has

prepared several informational documents relating to mosquito control for the public's education. He initiated a state-wide mosquito survey utilizing a survey tool called the light trap and has looked at newer insecticides as alternatives to current materials used for mosquito control. This year the Board has come forth with many ideas and much more effort to establish a solid foundation of technical assistance in mosquito control and policy matters.

The mosquito-climate cycle is important because mosquito breeding is greatly influenced by the amount of precipitation during the season. At the beginning of the 1980 fiscal year, weather conditions were ideal for producing mosquitoes. There was above normal rainfall in August, but the temperatures were below normal for the month and they affected mosquito activity. A very mild and dry winter led to low-to-moderate populations in the spring during which, however, there were localized areas of heavy infestation.

The budget of $54,575 covered the costs of the administrative work of the Board, services of regular employees of the Board, and necessary expenses incurred in overseeing the work of the various mosquito control projects in operation during the year.

CREDITS AND CAPTIONS

Cover: Ashfield, Massachusetts-- down the road from Lesure Farm. In 1978, Linwood Lesure was named "National Tree Farmer of the Year" by the American Forestry Institute.
Photo by Arthur Griffin.
Design by The Center for Media Development, UMass/Boston.

Inside Cover Photo Pages:

Front page (from top left, clockwise)--
Food and Agriculture Commissioner Fred Winthrop with Wallace C. Wilkie at his farm in Lakeville, the first selected for funding in the state Agricultural Preservation Restriction Program;
Governor Edward J. King with APR program participants Pauline Allard of the Rainville Trust, Uxbridge, and Albert B. Loring of Norwell;
Edward Swenson of Whitman, President of the Massachusetts Federation of Farmers and Gardeners Markets with daughter Sondra (left) and Bonnie Byrnes;
Al Volante at his farm in Needham;
Liz Walker of Channel 4 Eyewitness News at UMass Suburban Experiment Station in Waltham;
Hereford enjoying farm life in Massachusetts.

Back page (from top left, clockwise)--
Carolyn Shiel, farmstand manager at Allandale Farm in Brookline;
Governor King and part of group attending proclamation ceremonies for 1980 Massachusetts Agriculture Week;
at Fields Corner farmers market (left to right) Carol Fizer, Joe Harper, Krista Scharfenberg, Kristen McCormack and Joe Ureneck, members of Dorchester Gardenlands Preserve and Development Corporation;
at Lookout Farm in South Natick, Linda Blackman, consumer reporter at Channel 7 News, and John Johnson, farmstand manager;
Joe Finnegan (left), Manager of Little City Hall at Uphams Corner and Bob Downing of Harmony Farm in North Reading;
Maggie O'Keefe at Allandale Farm in Brookline.

Annual Report of the Massachusetts Department of Food and Agriculture:
Edited by Janet Christensen, assisted by Melanie Botelho, Simmons College student intern. Typed by Mary Lou Cafarella, assisted by Virginia McHugh.

NORTHEAST, USA

1978 CENSUS OF AGRICULTURE
PRELIMINARY REPORT
MASSACHUSETTS

AC78-P-25-000 Issued May 1980

The preliminary reports are being published on a flow basis for all counties in the United States with 10 farms or more and for each State, geographic region, and the United States. This series is intended to provide, at the earliest date, information on major data items. These items are standard for each State and county except in Table 3, Crops Harvested, where the items will vary by State according to their relative importance in the State in 1978. The 1978 data are subject to revision. Final data will be published in Volume 1, State and County Data.

Inventories of livestock and poultry and other specified items are as of December 31 of the census year. Crop and livestock production and sales data are for calendar year 1978, except for a few crops (such as citrus) for which the production year overlaps the calendar year. The volume 1 appendix will provide a more detailed description of how the census was taken along with pertinent definitions and explanations.

The 1978 census data collection program was the first to include an area segment sample to provide reliable estimates, for States, of the number and the characteristics of any farms not represented in the mail portion of the census. Estimates for such farms are an integral part of the totals shown in the State reports, but are not included in county totals, thus State totals for 1978 and 1974 are not directly comparable. The contribution of the area segment sample to State totals is shown on pages 5 through 8.

In keeping with prior practice, the dollar figures shown in this report have not been adjusted for changes in price levels between census years.

Definition of farm--In accordance with a joint agreement between the U.S. Department of Agriculture, the Office of Management and Budget, and the Bureau of the Census, announced on August 12, 1975, a farm, for statistical purposes, is any place from which $1,000 or more of agricultural products were sold, or normally would have been sold, during the census year. The previous definition (used for the 1959, 1964, 1969 censuses, and for the 1974 preliminary county reports) counted as a farm any place with less than 10 acres from which $250 or more of agricultural products were sold or normally would have been sold during the census year, or any place of 10 acres or more from which $50 or more of agricultural products were sold or normally would have been sold during the census year.

The effect of the change in definition on 1978 and 1974 data is shown for selected items in the appendix on page 4

Sampling--Data collected from only a sample of farms are subject to sampling error. The appendix in volume 1 will contain a detailed discussion.

Special tribute is paid to the millions of farm and ranch operators and other agriculture-associated people who furnished the individual reports from which these statistical summaries were compiled. Also acknowledged with gratitude is the contributory effort of U.S. Department of Agriculture and other county-level government and private officials who offered their support and willingly assisted individuals requesting help in completing their 1978 census reports.

The following symbols are used throughout the tables:
- Zero. (D) Data withheld to avoid disclosing information for individual farms. (X) Not applicable. (Z) Less than half of the unit reported (NA) Not available.

Table 1. Selected Summary Items: 1978 and 1974

	All farms		Farms with sales of $2,500 or more	
	1978	1974	1978	1974
Farms and land in farms:				
Farms ..... number	5 905	4 497	3 882	3 185
Land in farms ..... acres	680 513	601 734	537 717	496 050
Average size of farm ..... acres	115	134	139	156
Value of land and buildings: [1]				
Average per farm ..... dollars	169 774	128 535	197 031	150 448
Average per acre ..... dollars	1 440	961	1 399	966
Farms by size:				
Less than 10 acres ..... number	994	627	600	396
10 to 49 acres ..... number	1 798	1 185	1 029	746
50 to 179 acres ..... number	2 013	1 637	1 315	1 133
180 to 499 acres ..... number	931	876	784	752
500 to 999 acres ..... number	138	142	128	131
1,000 to 1,999 acres ..... number	25	21	21	19
2,000 acres or more ..... number	6	9	5	8
Land according to use:				
Total cropland ..... farms	5 544	4 212	3 660	2 957
acres	311 516	257 033	257 020	221 873
Harvested cropland ..... farms	5 123	4 032	3 430	2 874
acres	214 220	188 015	184 829	168 942
Cropland used only for pasture ..... farms	2 510	1 601	1 430	1 014
acres	77 487	55 467	58 373	43 669
Other cropland ..... farms	1 152	704	807	476
acres	19 809	13 551	13 818	9 262
Woodland including woodland pastured ..... farms	3 589	2 631	2 315	1 810
acres	273 786	240 463	205 790	188 792
Other pastureland and rangeland ..... farms	707	3 228	498	552
acres	31 304	104 238	23 972	33 240
Land in house lots, ponds, roads, wasteland, etc ..... farms	4 026	(2)	2 621	2 168
acres	63 907	(2)	50 935	52 145
Irrigated land ..... farms	1 029	879	895	750
acres	16 995	18 512	16 570	17 887

See footnotes at end of table

U.S. Department of Commerce
Bureau of the Census

For sale by Subscribers Services Section (Publications), Bureau of the Census, Washington,D.C. 20233, or any Department of Commerce district office
Price 25 cents per copy

Table 1. **Selected Summary Items: 1978 and 1974 —Con.**

		All farms		Farms with sales of $2,500 or more	
		1978	1974	1978	19
Agricultural products sold and farm related income:					
Market value of products sold [3]	$1,000	215 943	179 653	212 698	177 1
Average per farm	dollars	36 569	39 950	54 791	55 6
Crops	$1,000	101 461	86 453	100 103	85 3
Livestock and livestock products	$1,000	95 799	68 330	94 086	67 1
Poultry and poultry products	$1,000	18 682	24 134	18 508	23 9
Farms by value of sales:					
Sales of $20,000 or more	number	1 764	1 664	1 750	1 6
$100,000 or more	number	494	347	492	3
$40,000 to $99,999	number	697	685	687	6
$20,000 to $39,999	number	573	632	571	6
Sales of less than $20,000	number	4 141	2 833	2 132	1 5
$10,000 to $19,999	number	566	537	563	5
$5,000 to $9,999	number	719	498	718	4
$2,500 to $4,999	number	852	503	851	5
Less than $2,500	number	2 004	1 295	(X)	
Value of agricultural products sold directly to individuals for human consumption	farms	1 254	(NA)	848	(I
	$1,000	9 792	(NA)	9 462	(I
Income from machine work, customwork, and other agricultural services provided for others	farms	412	386	311	
	$1,000	836	1 307	696	1
Farms by type of organization:					
Individual or family	number	5 019	(NA)	3 106	2
Partnership	number	449	(NA)	383	
Corporation	number	375	(NA)	363	
Family held	number	335	(NA)	325	
Other than family held	number	40	(NA)	38	
Other—cooperatives, estates or trusts, institutional, etc	number	62	(NA)	30	
Operator characteristics:					
Tenure of operator:					
Full owner	farms	3 858	3 015	2 309	1
Part owner	farms	1 687	1 213	1 304	1
Tenant	farms	360	269	269	
Principal occupation and residence: [4]					
Farming	farms	3 069	2 560	2 572	2
Residence on farm operated	farms	2 476	(NA)	2 029	
Residence not on farm operated	farms	384	(NA)	354	
Other than farming	farms	2 836	1 604	1 310	
Residence on farm operated	farms	2 314	(NA)	995	
Residence not on farm operated	farms	361	(NA)	222	
Average age of operator [4]	years	51.9	54.2	52.3	
Sex of operator	male	5 448	(NA)	3 607	
	female	457	(NA)	275	
Operators reporting days of work off farm: [4]					
Any	farms	3 281	1 815	1 766	
100 days or more	farms	2 838	1 505	1 422	
Selected production expenses: [4]					
Livestock and poultry purchased	$1,000	11 890	8 110	11 511	7
Feed purchased for livestock and poultry	$1,000	40 933	40 395	39 576	39
Commercially mixed formula feeds	$1,000	33 733	36 735	33 147	36
Animal health costs	$1,000	1 541	(NA)	1 411	
Seeds, bulbs, plants, and trees	$1,000	7 933	6 645	7 771	6
Commercial fertilizer	$1,000	7 384	5 808	6 945	5
Other agricultural chemicals including lime	$1,000	4 072	2 768	3 870	2
Hired farm labor	$1,000	40 815	31 981	39 728	31
Workers working 150 days or more	farms	1 465	(NA)	1 323	1
	number	6 120	(NA)	5 742	4
Contract labor	$1,000	1 655	896	1 623	
Customwork and machine hire	$1,000	1 714	990	1 571	
Energy costs - petroleum products, electricity, coal, wood, coke, etc	$1,000	16 171	(NA)	15 521	
Gasoline and other petroleum products	$1,000	12 105	8 766	11 607	8
Gasoline	$1,000	4 859	(NA)	4 505	3
Diesel fuel	$1,000	1 131	(NA)	1 099	
Machinery and equipment: [4]					
Estimated market value of all machinery and equipment	$1,000	128 674	84 637	112 496	72
Average per farm	dollars	21 805	19 729	28 971	23
Motortrucks including pickups	farms	4 880	3 643	3 447	2
	number	9 982	7 710	8 035	6
Wheel tractors	farms	4 773	3 675	3 200	2
	number	10 974	8 630	8 523	7

[1] 1978 data are based on a sample of farms.
[2] Data included with Other pastureland and rangeland.
[3] 1974 data include sales of forest products.
[4] 1974 data exclude corporations and other organizations.

Table 2. Livestock and Poultry: 1978 and 1974

		All farms		Farms with sales of $2,500 or more	
		1978	1974	1978	1974
Cattle and calves inventory	farms	2 601	1 994	1 626	1 409
	number	102 572	103 938	93 669	96 204
Farms by size of inventory:					
1 to 19	farms	1 418	776	521	297
	number	9 859	6 238	4 123	2 539
20 to 99	farms	894	936	823	834
	number	42 127	46 198	(D)	42 914
100 to 499	farms	284	275	277	271
	number	47 331	45 008	(D)	44 257
500 or more	farms	5	7	5	7
	number	3 255	6 494	3 255	6 494
Cows and heifers that had calved	farms	2 250	1 730	1 436	1 274
	number	60 565	62 978	56 336	59 352
Beef cows	farms	1 305	759	620	402
	number	10 275	7 650	7 262	5 161
Milk cows	farms	1 358	1 239	1 032	1 058
	number	50 290	55 328	49 074	54 191
Heifers and heifer calves	farms	1 862	(NA)	1 223	1 102
	number	33 077	(NA)	30 214	29 915
Steers and bulls including calves	farms	1 546	(NA)	971	840
	number	8 930	(NA)	7 119	6 937
Cattle and calves sold	farms	2 065	1 745	1 495	1 333
	number	55 081	48 032	52 180	45 244
Cattle fattened on grain and concentrates	farms	321	(NA)	191	123
	number	3 057	(NA)	2 700	1 797
Dairy products sold	farms	934	(NA)	873	955
	$1,000	61 835	(NA)	61 214	50 396
Hogs and pigs inventory	farms	907	465	488	313
	number	58 856	43 229	54 741	41 968
Farms by size of inventory:					
1 to 99	farms	791	370	381	220
	number	8 804	4 089	(D)	3 166
100 to 499	farms	88	71	79	69
	number	(D)	14 806	(D)	(D)
500 or more	farms	28	24	28	24
	number	(D)	24 334	(D)	24 334
Hogs and pigs used or to be used for breeding	farms	365	(NA)	262	156
	number	7 352	(NA)	6 872	5 182
Hogs and pigs sold	farms	549	309	380	240
	number	66 208	52 681	63 771	51 642
Feeder pigs sold	farms	219	86	147	62
	number	14 385	11 531	13 229	11 172
Litters farrowed between—					
Dec. 1 of preceding year and Nov. 30	farms	405	206	281	167
	number	8 947	7 191	8 437	7 016
Dec. 1 of preceding year and May 31	farms	350	165	250	135
	number	4 541	3 720	4 162	3 643
June 1 and Nov. 30	farms	303	163	247	135
	number	4 406	3 471	4 275	3 373
Sheep and lambs inventory	farms	419	264	159	98
	number	7 153	5 896	3 585	2 696
Ewes 1 year old or older	farms	354	(NA)	128	86
	number	4 670	(NA)	2 459	1 979
Sheep and lambs sold	farms	277	164	112	63
	number	4 192	3 600	2 340	1 969
Sheep and lambs shorn	farms	314	(NA)	110	54
	number	6 069	(NA)	3 157	2 191
	pounds of wool	41 023	(NA)	21 073	12 979
Horses and ponies inventory	farms	1 388	710	644	370
	number	8 124	4 687	3 747	3 375
Chickens 3 months old or older inventory	farms	945	577	437	339
	number	1 512 703	1 956 434	1 479 628	1 936 943
Hens and pullets of laying age inventory	farms	925	558	430	332
	number	1 314 420	1 682 941	1 287 304	1 665 358
Farms by size of inventory:					
1 to 1,599	farms	841	456	350	233
	number	64 621	62 564	(D)	51 251
1,600 to 9,999	farms	53	61	49	58
	number	209 797	232 538	(D)	226 268
10,000 or more	farms	31	41	31	41
	number	1 040 002	(D)	1 040 002	(D)
Broilers sold	farms	49	31	25	22
	number	(D)	301 430	(D)	299 871
Turkeys sold	farms	70	(NA)	49	32
	number	(D)	(NA)	(D)	171 244

Table 3. Crops Harvested: 1978 and 1974

		All farms		Farms with sales of $2,500 or more	
		1978	1974	1978	1974
Corn for silage or green chop (green)	farms	967	(NA)	863	790
	acres	39 432	(NA)	38 245	33 273
	tons	646 248	(NA)	627 633	526 679
Irish potatoes	farms	187	226	131	163
	acres	3 504	4 266	3 456	4 180
	cwt	749 463	837 696	746 471	827 336
Hay, all (dry)	farms	3 083	2 191	1 862	1 464
	acres	133 299	110 327	107 183	94 114
	tons	263 190	225 714	229 725	201 372
Other tame dry hay (dry)	farms	2 209	(NA)	1 362	(NA)
	acres	80 435	(NA)	62 584	57 798
	tons	151 581	(NA)	129 715	119 780
Land in orchards	farms	515	366	300	249
	acres	8 566	9 366	7 573	8 913
Apples	farms	452	(NA)	272	243
	acres	7 691	(NA)	6 901	8 302
	lbs	92 202 921	(NA)	91 020 058	95 327 544
Vegetables, sweet corn or melons for sale	farms	1 095	931	897	682
	acres	15 373	(NA)	14 858	14 954
Sweet corn for sale	farms	671	(NA)	545	465
	acres	7 299	(NA)	7 037	7 619
Cranberries for sale (100-lb barrels)	farms	381	(NA)	336	304
	acres	10 062	(NA)	9 925	9 550
	100-lb	1 072 138	(NA)	1 065 572	757 413

Appendix. Effect of Definition Change for Selected Items: 1978 and 1974

	Definition used for 1974 and 1978		Definition used for 1959, 1964, and 1969		Operations excluded by current definition but not by 1959 definition	
	1978	1974	1978	1974	1978	1974
All farms (number)	5 905	4 497	8 830	5 127	2 925	630
Farms with sales less than $2,500 (number)	2 004	1 295	4 929	1 925	2 925	630
Land in farms (acres)	680 513	601 734	780 985	630 752	100 472	29 018
Total cropland (acres)	311 516	257 033	339 204	262 685	27 688	5 652
Harvested cropland (acres)	214 220	188 015	224 948	189 335	10 728	1 320
Value of agricultural products sold ($1,000)	215 943	179 653	216 654	179 832	712	179
Crops ($1,000)	101 461	86 453	101 756	86 534	295	81
Livestock, poultry, and their products ($1,000)	114 481	92 464	114 899	92 555	417	91
Cattle and calves inventory (number)	102 572	103 938	104 510	104 363	1 938	425
Hogs and pigs inventory (number)	58 856	43 229	59 119	43 418	263	189
Chickens 3 months old or older inventory (number)	1 512 703	1 956 434	1 524 253	1 959 408	11 550	2 974

ESTIMATED NUMBER AND CHARACTERISTICS OF FARMS NOT INCLUDED IN COUNTY TOTALS

The 1978 Census of Agriculture was conducted primarily by mail for maximum economy, supplemented by thorough personal canvass of a statistical area segment sample for maximum accuracy of coverage.

The following portion of the State preliminary report is based on the area segment sample, and provides estimates of the number and characteristics of any farms in the State not represented in the mail portion of the 1978 census. The sample design provided for reliable estimates for States but was not large enough to provide estimates for counties. Thus, any data item for 1978 in the State totals portion of this preliminary report (pages 1-4) can normally be expected to be the sum of that data item as reported in the county preliminary reports plus the entry for that data item in this "not allocated to counties" portion.

Data collection for the 1969 and 1974 Censuses of Agriculture was primarily by mail. The mailing lists for these censuses were compiled from the previous census and from records obtained from the Internal Revenue Service, U.S. Department of Agriculture, other government agencies, and nongovernment agriculture-related associations.

The constant change occurring in farm operations and the time involved in obtaining source lists and combining them into a final mailing list cause the list to be somewhat out of date before it is used. In addition, some farm operators, particularly for small operations, never appear on any of the source lists. Evaluation studies for both the 1969 and 1974 censuses indicated that the lists were not adequate to assure complete coverage. The estimates indicate that approximately 17 percent of all farms were missed in the 1969 census and 13 percent were missed in the 1974 census, representing about 3 percent of the total value of all agricultural products sold for each of the two census years.

Although the aggregate value of products attributable to the farms which were missed was small both in terms of total products and farms reporting various types of products, the undercoverage was significant especially in number of farms. The dual system of data collection was implemented for the 1978 census in order to minimize the effect of undercoverage on census data. In addition to complete coverage of a mailing list, enumerators canvassed an area segment sample in each State and interviewed farm operators for census data. This sample was designed to provide State estimates for farms not on the mailing list. Data for all farms on the mailing list were used to prepare county reports. Farms enumerated in the area segments but not identified on the mailing list were used as the basis for estimating the total number and characteristics of all farms in the State not on the mailing list.

For 1974, data were collected only from the mailing list and the State total for a specific item is equal to the sum of the county reports. No data comparable to the 1978 area segment sample estimates were included in 1974 State totals. The State totals for 1978 with the area segment sample data--not allocated to counties--excluded, are directly comparable to the 1974 State totals. An evaluation of coverage for the 1978 census will be provided in a special coverage report.

Since the data in this report were collected from a sample of farms, all items are subject to sampling error. The appendix in volume 1 will contain a detailed discussion and measures of sampling error for census data.

The following symbols are used throughout the tables:
- Zero. (D) Data withheld to avoid disclosing information for individual farms.
(X) Not applicable. (Z) Less than half of the unit reported. (NA) Not available.

Table 1. Selected Summary Items: 1978 and 1974

	All farms		Farms with sales of $2,500 or more	
	1978	1974	1978	1974
Farms and land in farms:				
Farms—number	937	(NA)	269	(NA)
Land in farms—acres	61 143	(NA)	27 563	(NA)
Average size of farm—acres	65	(NA)	102	(NA)
Value of land and buildings: [1]				
Average per farm—dollars	93 557	(NA)	93 943	(NA)
Average per acre—dollars	1 434	(NA)	917	(NA)
Farms by size:				
Less than 10 acres—number	189	(NA)	47	(NA)
10 to 49 acres—number	391	(NA)	106	(NA)
50 to 179 acres—number	312	(NA)	78	(NA)
180 to 499 acres—number	45	(NA)	38	(NA)
500 to 999 acres—number	-	(NA)	-	(NA)
1,000 to 1,999 acres—number	-	(NA)	-	(NA)
2,000 acres or more—number	-	(NA)	-	(NA)
Land according to use:				
Total cropland—farms	875	(NA)	245	(NA)
acres	34 296	(NA)	14 582	(NA)
Harvested cropland—farms	704	(NA)	144	(NA)
acres	16 246	(NA)	6 587	(NA)
Cropland used only for pasture—farms	663	(NA)	172	(NA)
acres	15 075	(NA)	7 322	(NA)
Other cropland—farms	128	(NA)	70	(NA)
acres	2 975	(NA)	673	(NA)
Woodland including woodland pastured—farms	595	(NA)	200	(NA)
acres	20 355	(NA)	10 872	(NA)
Other pastureland and rangeland—farms	45	(NA)	22	(NA)
acres	2 366	(NA)	638	(NA)
Land in house lots, ponds, roads, wasteland, etc.—farms	751	(*)	215	(NA)
acres	4 126	(*)	1 471	(NA)
Irrigated land—farms	59	(NA)	37	(NA)
acres	184	(NA)	140	(NA)

See footnotes at end of table

Table 1. **Selected Summary Items: 1978 and 1974 —Con.**

		All farms		Farms with sales of $2,500 or more	
		1978	1974	1978	1974
Agricultural products sold and farm related income:					
Market value of products sold [1]	$1,000	2 671	(NA)	2 186	(NA)
Average per farm	dollars	2 851	(NA)	8 125	(NA)
Crops	$1,000	742	(NA)	541	(NA)
Livestock and livestock products	$1,000	1 751	(NA)	1 492	(NA)
Poultry and poultry products	$1,000	178	(NA)	152	(NA)
Farms by value of sales:					
Sales of $20,000 or more	number	22	(NA)	22	(NA)
$100,000 or more	number	-	(NA)	-	(NA)
$40,000 to $99,999	number	-	(NA)	-	(NA)
$20,000 to $39,999	number	22	(NA)	22	(NA)
Sales of less than $20,000	number	915	(NA)	247	(NA)
$10,000 to $19,999	number	52	(NA)	52	(NA)
$5,000 to $9,999	number	78	(NA)	78	(NA)
$2,500 to $4,999	number	117	(NA)	117	(NA)
Less than $2,500	number	668	(NA)	(X)	(X)
Value of agricultural products sold directly to individuals for human consumption	farms	194	(NA)	92	(NA)
	$1,000	227	(NA)	177	(NA)
Income from machine work, customwork, and other agricultural services provided for others	farms	14	(NA)	14	(NA)
	$1,000	5	(NA)	5	(NA)
Farms by type of organization:					
Individual or family	number	922	(NA)	254	(NA)
Partnership	number	8	(NA)	8	(NA)
Corporation	number	7	(NA)	7	(NA)
Family held	number	7	(NA)	7	(NA)
Other than family held	number	-	(NA)	-	(NA)
Other—cooperatives, estates or trusts, institutional, etc	number	-	(NA)	-	(NA)
Operator characteristics:					
Tenure of operator:					
Full owner	farms	678	(NA)	184	(NA)
Part owner	farms	220	(NA)	78	(NA)
Tenant	farms	39	(NA)	7	(NA)
Principal occupation and residence: [2]					
Farming	farms	206	(NA)	75	(NA)
Residence on farm operated	farms	206	(NA)	75	(NA)
Residence not on farm operated	farms	-	(NA)	-	(NA)
Other than farming	farms	731	(NA)	194	(NA)
Residence on farm operated	farms	708	(NA)	187	(NA)
Residence not on farm operated	farms	23	(NA)	7	(NA)
Average age of operator [3]	years	48.6	(NA)	46.9	(NA)
Sex of operator	male	867	(NA)	245	(NA)
	female	70	(NA)	24	(NA)
Operators reporting days of work off farm: [3]					
Any	farms	749	(NA)	211	(NA)
100 days or more	farms	718	(NA)	187	(NA)
Selected production expenses: [3]					
Livestock and poultry purchased	$1,000	432	(NA)	319	(NA)
Feed purchased for livestock and poultry	$1,000	1 028	(NA)	595	(NA)
Commercially mixed formula feeds	$1,000	417	(NA)	240	(NA)
Animal health costs	$1,000	123	(NA)	70	(NA)
Seeds, bulbs, plants, and trees	$1,000	100	(NA)	32	(NA)
Commercial fertilizer	$1,000	211	(NA)	110	(NA)
Other agricultural chemicals including lime	$1,000	152	(NA)	113	(NA)
Hired farm labor	$1,000	332	(NA)	103	(NA)
Workers working 150 days or more	farms	92	(NA)	13	(NA)
	number	275	(NA)	38	(NA)
Contract labor	$1,000	5	(NA)	(D)	(NA)
Customwork and machine hire	$1,000	13	(NA)	1	(NA)
Energy costs - petroleum products, electricity, coal, wood, coke, etc	$1,000	357	(NA)	211	(NA)
Gasoline and other petroleum products	$1,000	285	(NA)	157	(NA)
Gasoline	$1,000	181	(NA)	89	(NA)
Diesel fuel	$1,000	44	(NA)	40	(NA)
Machinery and equipment: [4]					
Estimated market value of all machinery and equipment	$1,000	6 508	(NA)	3 225	(NA)
Average per farm	dollars	6 945	(NA)	11 988	(NA)
Motortrucks including pickups	farms	682	(NA)	255	(NA)
	number	886	(NA)	349	(NA)
Wheel tractors	farms	714	(NA)	198	(NA)
	number	1 052	(NA)	317	(NA)

[1] 1978 data are based on a sample of farms.
[2] Data included with Other pastureland and rangeland.
[3] 1974 data include sales of forest products.
[4] 1974 data exclude corporations and other organizations.

Table 2. Livestock and Poultry: 1978 and 1974

	All farms		Farms with sales of $2,500 or more	
	1978	1974	1978	1974
Cattle and calves inventory — farms	526	(NA)	132	(NA)
number	5 275	(NA)	3 000	(NA)
Farms by size of inventory:				
1 to 19 — farms	456	(NA)	69	(NA)
number	2 400	(NA)	272	(NA)
20 to 99 — farms	70	(NA)	63	(NA)
number	2 875	(NA)	2 728	(NA)
100 to 499 — farms	-	(NA)	-	(NA)
number	-	(NA)	-	(NA)
500 or more — farms	-	(NA)	-	(NA)
number	-	(NA)	-	(NA)
Cows and heifers that had calved — farms	459	(NA)	118	(NA)
number	3 299	(NA)	2 170	(NA)
Beef cows — farms	401	(NA)	103	(NA)
number	2 856	(NA)	1 950	(NA)
Milk cows — farms	200	(NA)	31	(NA)
number	443	(NA)	220	(NA)
Heifers and heifer calves — farms	282	(NA)	22	(NA)
number	854	(NA)	114	(NA)
Steers and bulls including calves — farms	212	(NA)	54	(NA)
number	1 122	(NA)	716	(NA)
Cattle and calves sold — farms	258	(NA)	93	(NA)
number	2 078	(NA)	1 437	(NA)
Cattle fattened on grain and concentrates — farms	29	(NA)	7	(NA)
number	158	(NA)	70	(NA)
Dairy products sold — farms	31	(NA)	7	(NA)
$1,000	235	(NA)	229	(NA)
Hogs and pigs inventory — farms	279	(NA)	85	(NA)
number	5 020	(NA)	2 899	(NA)
Farms by size of inventory:				
1 to 99 — farms	263	(NA)	77	(NA)
number	2 468	(NA)	1 947	(NA)
100 to 499 — farms	16	(NA)	8	(NA)
number	2 552	(NA)	952	(NA)
500 or more — farms	-	(NA)	-	(NA)
number	-	(NA)	-	(NA)
Hogs and pigs used or to be used for breeding — farms	84	(NA)	62	(NA)
number	691	(NA)	517	(NA)
Hogs and pigs sold — farms	114	(NA)	77	(NA)
number	5 527	(NA)	4 784	(NA)
Feeder pigs sold — farms	74	(NA)	46	(NA)
number	2 375	(NA)	2 074	(NA)
Litters farrowed between—				
Dec. 1 of preceding year and Nov. 30 — farms	106	(NA)	69	(NA)
number	855	(NA)	652	(NA)
Dec. 1 of preceding year and May 31 — farms	92	(NA)	62	(NA)
number	612	(NA)	416	(NA)
June 1 and Nov. 30 — farms	76	(NA)	69	(NA)
number	243	(NA)	236	(NA)
Sheep and lambs inventory — farms	92	(NA)	8	(NA)
number	638	(NA)	72	(NA)
Ewes 1 year old or older — farms	85	(NA)	8	(NA)
number	530	(NA)	40	(NA)
Sheep and lambs sold — farms	39	(NA)	-	(NA)
number	285	(NA)	-	(NA)
Sheep and lambs shorn — farms	60	(NA)	-	(NA)
number	544	(NA)	-	(NA)
pounds of wool	3 579	(NA)	-	(NA)
Horses and ponies inventory — farms	481	(NA)	133	(NA)
number	2 464	(NA)	613	(NA)
Chickens 3 months old or older inventory — farms	259	(NA)	31	(NA)
number	46 830	(NA)	36 411	(NA)
Hens and pullets of laying age inventory — farms	253	(NA)	31	(NA)
number	32 357	(NA)	24 411	(NA)
Farms by size of inventory:				
1 to 1,599 — farms	245	(NA)	23	(NA)
number	8 357	(NA)	411	(NA)
1,600 to 9,999 — farms	8	(NA)	8	(NA)
number	24 000	(NA)	24 000	(NA)
10,000 or more — farms	-	(NA)	-	(NA)
number	-	(NA)	-	(NA)
Broilers sold — farms	8	(NA)	8	(NA)
number	600	(NA)	600	(NA)
Turkeys sold — farms	8	(NA)	8	(NA)
number	160	(NA)	160	(NA)

Table 3. Crops Harvested: 1978 and 1974

		All farms		Farms with sales of $2,500 or more	
		1978	1974	1978	1974
Corn for silage or green chop (green)	farms	53	(NA)	31	(NA)
	acres	874	(NA)	789	(NA)
	tons	12 022	(NA)	11 031	(NA)
Irish potatoes	farms	36	(NA)	-	(NA)
	acres	26	(NA)	-	(NA)
	cwt	984	(NA)	-	(NA)
Hay, all (dry)	farms	556	(NA)	130	(NA)
	acres	14 176	(NA)	5 136	(NA)
	tons	18 231	(NA)	9 788	(NA)
Other tame dry hay (dry)	farms	436	(NA)	123	(NA)
	acres	12 345	(NA)	4 811	(NA)
	tons	15 745	(NA)	8 943	(NA)
Land in orchards	farms	84	(NA)	14	(NA)
	acres	440	(NA)	203	(NA)
Apples	farms	53	(NA)	7	(NA)
	acres	355	(NA)	161	(NA)
	lbs	932 875	(NA)	924 000	(NA)
Vegetables, sweet corn or melons for sale	farms	122	(NA)	84	(NA)
	acres	399	(NA)	353	(NA)
Sweet corn for sale	farms	87	(NA)	49	(NA)
	acres	198	(NA)	169	(NA)
Cranberries for sale (100-lb barrels)	farms	-	(NA)	-	(NA)
	acres	-	(NA)	-	(NA)
	100-lb	-	(NA)	-	(NA)

Appendix. Effect of Definition Change for Selected Items: 1978 and 1974

		Definition used for 1974 and 1978		Definition used for 1959, 1964, and 1969		Operations excluded by current definition but not by 1959 definition	
		1978	1974	1978	1974	1978	1974
All farms	number	937	(NA)	2 910	(NA)	1 973	(NA)
Farms with sales less than $2,500	number	668	(NA)	2 641	(NA)	1 973	(NA)
Land in farms	acres	61 143	(NA)	120 176	(NA)	59 033	(NA)
Total cropland	acres	34 296	(NA)	52 714	(NA)	18 418	(NA)
Harvested cropland	acres	16 246	(NA)	23 402	(NA)	7 156	(NA)
Value of agricultural products sold	$1,000	2 671	(NA)	3 100	(NA)	429	(NA)
Crops	$1,000	742	(NA)	912	(NA)	170	(NA)
Livestock, poultry, and their products	$1,000	1 929	(NA)	2 188	(NA)	258	(NA)
Cattle and calves inventory	number	5 275	(NA)	6 599	(NA)	1 324	(NA)
Hogs and pigs inventory	number	5 020	(NA)	5 161	(NA)	141	(NA)
Chickens 3 months old or older inventory	number	46 830	(NA)	54 843	(NA)	8 013	(NA)


FARMERS
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FIELDS CORNER
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JULY 19 - OCT. 11
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FRESH FOOD

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